Journal of the Association of American Medical Colleges

Volume 6 SEPTEMBER, 1931 *Number 5*

CONTENTS

Published bimonthly, January, March, May, July, September and November, at 25 E. Washington St., Chicago, Illinois, by the Association of American Medical Colleges. Subscription Price, $3.00 per year. Single Copies, 75 cents.

Entered as second class matter January 17, 1930, at the Post Office at Chicago, Illinois, under the Act of March 3, 1879.

(Continuing the Bulletin of the Association of American Medical Colleges)

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

OFFICERS AND COMMITTEES FOR 1930-1931

President: MAURICE H. REES, Denver.
Vice-President: C. C. BASS, New Orleans.
Secretary-Treasurer: FRED C. ZAPFFE, 25 East Washington St., Chicago.

EXECUTIVE COUNCIL

BURTON D. MYERS, Chairman, Bloomington, Ind.; MAURICE H. REES, Denver; ALEXANDER S. BEGG, Boston; E. P. LYON, Minneapolis; IRVING S. CUTTER, Chicago; WILLIAM DARRACH, New York; FRED C. ZAPFFE, Chicago.

MEMBERS

Alabama

University of Alabama, School of Medicine, University.

California

College of Medical Evangelists, Loma Linda and Los Angeles.

Stanford University School of Medicine, San Francisco and Stanford University.

University of California Medical School, San Francisco and Berkeley.

Canada

McGill University Faculty of Medicine, Montreal.

University of Manitoba Faculty of Medicine, Winnipeg.

University of Toronto Faculty of Medicine, Toronto.

Colorado

University of Colorado School of Medicine, Denver.

Connecticut

Yale University School of Medicine, New Haven.

District of Columbia

Georgetown University School of Medicine, Washington.

George Washington University Medical School, Washington.

Howard University School of Medicine, Washington.

Army Medical School, Washington (Honorary).

Navy Medical School, Washington (Honorary).

Georgia

Emory University School of Medicine, Atlanta.

University of Georgia Medical Department, Augusta.

Illinois

Loyola University School of Medicine, Chicago.

Northwestern University Medical School, Chicago.

University of Chicago (Rush), Chicago.

University of Illinois College of Medicine, Chicago.

Indiana

Indiana University School of Medicine, Bloomington and Indianapolis.

Iowa

State University of Iowa College of Medicine, Iowa City.

Kansas

University of Kansas School of Medicine, Lawrence and Rosedale.

Kentucky

University of Louisville School of Medicine, Louisville.

Louisiana

Tulane University of Louisiana School of Medicine, New Orleans

Maryland

Johns Hopkins University School of Medicine, Baltimore.

University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore.

Massachusetts

Boston University School of Medicine, Boston.

Medical School of Harvard University, Boston.

Tufts College Medical School, Boston.

Michigan

Detroit College of Medicine and Surgery, Detroit.

University of Michigan Medical School, Ann Arbor.

Continued on Third Cover Page

EGES

er;
hicago;

icine,
School,
hicago.
Medi-

dicine,

Med-

licine,

Medi-

ol of

Medi-

Medi-
and

cine,
sity,
.

ery,
ool,

JOURNAL
OF THE
Association of American Medical Colleges

Volume 6 SEPTEMBER, 1931 Number 5

Some Present Day Trends in the Teaching of Psychiatry*

FRANKLIN G. EBAUGH
Professor of Psychiatry, University of Colorado School of Medicine

Psychiatric teaching, in its present status, is not fulfilling its educational possibilities and obligations, although there is much good work being done in this direction. That this is true seems evident when we take a glance at the magnitude of nervous and mental disease as a public health problem. Although the medical profession and teaching institutions have long been cognizant of the appalling statistics in the field of nervous and mental diseases, there has been little organized effort to meet this situation by creating adequate undergraduate and postgraduate teaching in psychiatry.

You are familiar with the statistics. We know, for instance, from dependable sources that in 1928 one person in each 325 was in an institution for nervous and mental disorders, including mental deficiency and epilepsy. This ratio is 7.5 higher than that for tuberculosis. In fact, one type of mental disease alone takes more beds than are used for tuberculosis and its complications. There are about 300,000 mental hospital patients with 75,000 new admissions each year. At this rate, about 1,000,000 of the young people now in college will be inmates of mental hospitals at sometime in their lives.

Existing facts indicate that one-half of the admissions to mental hospitals could be avoided by complete studies and guidance of behavior and emotions during childhood and adolescence. Likewise, it is believed that approximately one-half of the 15,000 actual suicides and 35,400 attempted suicides represent preventable types of mental disorder.

Statistics are even more appalling in fields allied to mental disorder, mainly social maladjustment in the form of dependency, delinquency and crime. (Statistics indicate that at least 20 per cent of jail and penitentiary inmates are mentally ill, and approximately 40 per cent are mental defectives.) When we visualize the barrier to treatment and prevention formed by tradition, superstition, predestination and fatalism, these problems become more acute.

*Read at the Forty-first Annual Meeting of the Association of American Medical Colleges, held in Denver, Colorado, October 14-16, 1930.

The inadequacies of psychiatric teaching may be reflected by the fact that only from 30 to 35 per cent of patients admitted to our state hospitals recover. No other group of diseases shows such an unfavorable outcome, although psychopathic hospitals have markedly improved this result.

An analysis of the time devoted to the teaching of psychiatry in some schools is rather illuminating. Recently, I sent a brief questionnaire to all class A medical schools to obtain statistical data regarding the place taken by psychiatry and neurology in the 1920 and 1930 schedules. Twenty-two of the sixty-six class A medical schools offering a four year course responded to the questionnaire. Of these twenty-two, fifteen showed an increase in the amount of required hours devoted to the teaching of psychiatry; two, an increase in elective hours; ten, an increase in required hours in neurology; and three, an increase for the elective hours in neurology. Only two schools showed a decrease in required hours and one school showed a decrease in elective hours. Six schools showed a decrease in required hours for neurology and one school showed a decrease in required hours for neurology and one school showed a decrease in elective hours. For neurology, there was no change in the required hours in six schools and no change in elective hours for eighteen schools.

The data obtained indicated that the total number of hours in these twenty-two schools devoted to the teaching of psychiatry in 1920-1921 was 743, whereas this total had increased in 1929-1930 to 1,195. The average number of hours per school devoted to psychiatry in 1920 was 34, and this had increased to 54 for the present year. The average number of hours devoted to the teaching of neurology in 1920 was 48 and in 1929-1930 it was 53. Six of the class A schools studied did not devote any time to psychiatry in 1920, and four did not devote any time to neurology; whereas for the present year no schools were found in the twenty-two studied that did not give required or elective work. Other comparisons in the group of twenty-two schools studied were as follows:

TABLE 1. SCHOOLS CLASSIFIED WITH REFERENCE TO REQUIRED COURSES IN NEUROLOGY AND PSYCHIATRY

	Neurology		Psychiatry	
	1920	1930	1920	1930
No required hours	4	1*	6	1*
10 to 50 required hours	9	11	11	11
51 to 100 required hours	6	7	4	7
101 to 200 required hours	3	3	1	3
Total schools	22	22	22	22

*Yale has no required course but gives an adequate elective course.

The data for elective courses are summarized as follows in the group of twenty-two representative class A schools studied:

TABLE 2. SCHOOLS CLASSIFIED WITH REFERENCE TO ELECTIVE COURSES IN NEUROLOGY AND PSYCHIATRY

	Neurology		Psychiatry	
	1920	1930	1920	1930
No elective hours	18	14	20	16
10 to 25 elective hours	3	5	1	5
26 to 50 elective hours	1	2	1	0
75 to 100 elective hours	0	1*	0	1*
Total schools	22	22	22	22

*Yale has no required course but gives an adequate elective course.

The use of hospital beds in connection with the teaching of psychiatry in these schools is summarized in Table 3.

TABLE 3. SCHOOLS CLASSIFIED WITH REFERENCE TO AVAILABILITY AND USE OF HOSPITAL BEDS IN CONNECTION WITH THE TEACHING OF PSYCHIATRY

	1920	1930
None	6	3
Inadequate*	1	1
Adequate—not utilized†	4	2
Adequate—partly utilized	7	6
Adequate—well utilized‡	4	10
Total schools	22	22

*Indicates beds in a general hospital service without other facilities or a very small number of psychiatric beds available.

†Indicates that there are sufficient psychiatric cases available for study but that no clinical clerkships or ward rounds were required of the students and the material is used only in clinical demonstrations and didactic teaching.

‡Indicates a sufficient number of beds available and a sufficient provision for clinical clerkships for ward work.

Table 4 classifies the schools with reference to available outpatient facilities:

TABLE 4. AVAILABLE OUTPATIENT FACILITIES

	1920	1930
None	10	4
Inadequate*	2	2
Adequate—not utilized†	1	0
Adequate—partly utilized	5	7
Adequate—well utilized‡	4	9
Total schools	22	22

*Indicates a lack of provision for special psychiatric outpatient clinics under circumstances in which some psychiatric clinical teaching is done as part of the general dispensary regime.

†Indicates that there is a good outpatient service is psychiatry available but training in psychiatric dispensaries is not provided for the students.

‡Indicates special psychiatric clinics available and provision for clinical teaching in these.

Table 5 classifies the schools with reference to available child guidance teaching:

TABLE 5. AVAILABLE CHILD GUIDANCE TEACHING

	1920	1930
None	16	8
Inadequate*	4	7
Adequate	2	7
Total schools	22	22

*Indicates that child guidance is taught entirely by didactic methods without clinical contact with the patients or that the clinical contacts are too limited to give the student a fair understanding of the problem.

Table 6 classifies the schools with reference to available clinical clerkships and ward work in psychiatry:

TABLE 6. CLERKSHIPS AND WARD WORK IN PSYCHIATRY

	1920	1930
None	13	8
Inadequate*	5	5
Adequate	4	9
Total schools	22	22

*Indicates either too short a period of clinical clerkship or the limitation of the number of individual patients studied to such an extent that it would be impossible to cover adequately the important psychiatric reaction types.

These tables indicate the general trend in the time devoted to the teaching of psychiatry. They do not give an accurate description of the situation. It is evident that courses in psychiatry which omit or give insufficient clerkships or ward contacts with individual psychiatric patients, or schools which make no provision or inadequate provision for courses in child guidance and mental hygiene are not meeting the demands for adequate teaching. Very few of the schools studied make adequate provision for a full course in all departments. Nevertheless, the entire situation is so much better than it was ten years ago that it is very encouraging.

Of the forty-four schools not studied in detail, catalogs were available for forty. On the basis of the number of hours given in psychiatry and the type of didactic and clinical work offered, these institutions show for 1929-1930 no provision for psychiatry in two schools, inadequate provision in twenty-nine schools, and adequate provision in nine schools. We question seriously a class A standing for many of these schools on this basis. Courses were considered adequate in this estimation only when they provide a well rounded study in all divisions of psychiatry.

The psychobiologic viewpoint of Adolf Meyer has made the studies of the nature of mental disorders productive and fascinating, and has

offered new hope for the prevention and successful treatment of these diseases. We are very fortunate in having psychiatry presented to us as a living subject, with outstanding relations not only to general medicine but to the social problems of everyday life. We regard mental illness as the gradual accumulative result of unhealthy reactions of the individual to the demands of his environment. We trace in a given case all the factors that go to the production of these reactions. These factors can be summarized as somatogenic, neurogenic, exogenic, psychogenic and constitutional. This viewpoint has resulted in a departure from the old descriptive types of psychiatry to the present day genetic-dynamic concepts in which we study the total organism reacting to a total situation. We are in this sense "dealing with functions of the total person and not merely detachable parts." This viewpoint has enabled us to study difficulties of the total unified adjustment and behavior of the patient.

In an approach to teaching psychiatry through the genetic-dynamic viewpoint, Meyer has insisted that the student should work out a personality study of a certain person, preferably himself or herself, with the purpose of obtaining a picture of the live human organism studied as a personality. Meyer aptly states that such a personality study is as important a procedure as the dissection of a cadaver, and, naturally, an essential supplement to the ordinary training.

Through this experience, the student is prepared to extend the work with patients and is taught methods of examination of psychiatric cases. The student studies life facts and situations in his patients and is not drilled in schemes for classification of mental disorders. This leads from interest in more or less fixed diagnoses to an interest in the understanding of the whole patient and his problem. The student follows genetic-dynamic considerations instead of attempting to classify and pigeon-hole his patient. He studies life situations and reactions and formulates interpretations which can be utilized to understand and modify the adaptation of the individual. The student singles out distinctive reaction patterns in his attempts to understand and group the essential demonstrable facts underlying a mental disorder.

The time has definitely come when psychiatry need no longer continue to be isolated or be regarded as the mysterious preserve of a few specialists, but when a fundamental knowledge of psychiatry should be within easy reach of the general practitioner in all its implications concerning the importance of early recognition, prevention and treatment. Physicians should realize that mental disease is always an individual affair and that characteristic symptoms and syndromes have little mean-

ing apart from the setting in which they develop. This setting includes, of course, the individual's personality, and history from his earliest days as well as the general mental and physical condition at the time. We want to understand the patient as an average, every-day he, she, you or I individual as well as the problems he is reacting to which result in mental disorder.

Nowadays we hear of the development of social psychiatry, we read of industrial psychiatry and forensic psychiatry. Likewise, our literature has been crowded to the saturation point with developments under the head of extramural psychiatry, and with developments in the field of child guidance and general mental hygiene. There is no doubt that the developments reviewed under these headings have been extensive and useful, but, still, we should be extremely conservative concerning their application to the problems of every-day life. It seems to me that it is of greatest importance for us to be patient, cautious, thorough and intensive in our work, and keep as our main idea proper training of personnel to take up the various phases in our rapidly developing and expanding field. These developments in the final analysis depend on our progress in teaching psychiatry and on our ability to reach the young, splendidly trained medical school graduate and intern of the present day. There is no doubt that definite success of varying degrees will result with patient, conservative, sustained efforts in the educational fields of psychiatry from the preventive viewpoint.

It is no doubt difficult for older, established institutions to break away from tradition and change the routine of teaching schedules, while a newer institution can more easily do so, especially where the facilities made possible by the leadership of Dean Rees afford opportunities to do away with the older didactic teaching and put in its place individual case study and clerkships. Having the advantages of a new hospital, operating in close association with an adjoining university general hospital and medical school, we have attempted to develop a teaching schedule in our small institution to meet the requirements of the undergraduate student as well as the graduate physician.

Teaching in the University of Colorado

In the University of Colorado Medical School the teaching of psychiatry is patterned closely after that developed by Adolf Meyer; fifty-four hours are devoted to class room discussion and demonstrations and ninety hours to clinical clerkships in the ward and outpatient clinics. During the second year, the student spends ten hours in a course in psychobiology. He studies the facts regarding his personality under these headings:

1. General personality survey.
2. Special analysis of the psychobiological assets.
3. Range and fluctuations of fitness with regard to work, play, rest and sleep.
4. Social relations and the relative role of self-dependence and social dependence.
5. Sex development.
6. The synthesis and balance of the personality.
7. Difficulties and handicaps.
8. Specific disappointments and reactions to them.
9. Assets and tendencies, favorable and detractive, traced to:
    a. Heredity.
    b. Developmental factors.
    c. External influences.
10. An enumeration of the events, experiences and situations in life which constitute special dynamic complexes or determining tendencies, in the form of an index of the significant results of the personality study.

The student follows through "the problems of observation and of singling out the salient objective facts, the problems of formulating these objective facts in a dependable and helpful record, and the determination of the best means of bringing the inferences to an objective test." He is given some insight regarding the mechanisms and motivations of behavior and of mental conflict and its consequences, such as anxiety, repression, dissociation, over-compensation, projection and other results of conflict and repression such as sublimation, mannerisms, slips of the tongue, forgetting, and so forth.

This course is followed up in the third year work when the student spends forty-four hours in class work and discussions of the various reaction sets beginning with the organic reactions and ending with the psychoneurotic reaction types. During this year, the student conducts actual individual case studies, spending twenty-four hours in section work. He is familiarized with graphic methods of study of mental disorders, according to the method devised by Adolf Meyer. The first clearly represents the genetic-dynamic viewpoint in psychiatry through which a complete study of the individual is made from the earliest beginning up to the time of the present difficulties of adjustment. This represents the longitudinal method of case study. The second method represents a cross section of the phenomenology of a psychosis, showing the reaction between the individual and his assets and what he is called on to react to in the form of toxic and physical influences, psychogenic upsets and organic upsets.

These two methods have been found to be very valuable in stimulating the student's interest in psychiatry, as well as in adding to his understanding of the individual factors present in each case of mental disorder. Following this approach, we find that the student becomes more interested in studying the facts presented by the patient than in classifying the patient under some definite disease heading. He prepares case reports which are used for later demonstrations before the entire class.

The teaching of psychiatry should be combined with that of other departments. This should broaden the students' viewpoint. Perhaps, the fact that this possibility has been sadly neglected in the past constitutes one of the reasons why psychiatry tends still to continue as an isolated subject. This year arrangements have been made for combined teaching with the departments of gynecology and obstetrics. The subjects to be discussed are covered in the following outline:

PROPOSED MATERIAL TO BE DISCUSSED IN COMBINED TEACHING IN THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

A. Psychiatric significance of menstruation.
   1. Preparation of adolescent for this function.
   2. Conditioning experiences; example of mother and older sister; invalidism.
   3. Fixation on pelvis.
   4. Relation of menstrual dysfunction to involutional developments.
   5. Relation to recessive personality development; fear and later conflict factors in pattern.
   6. Masturbation conflicts, etc.
   7. Amenorrhea in functional psychoses.
   8. Affective lability.

B. Mental phenomena associated with pregnancy.
   1. Anxious preoccupations.
      a. Fear of labor.
      b. Fear of pre-natal influences.
      c. Fear of deformity of child.
      d. Fear of inability to nurse.
      e. Fear of infection.
   2. Conflicts regarding undesirable pregnancy.
   3. Identifying phenomena with mother.
   4. Neurotic vomiting.
   5. Food fads.
   6. Fantasy formations.
   7. Morning sickness.
   8. Quickening phenomena.
   9. Mental attitudes during pregnancy—depressive outbreaks—schizophrenic outbursts—excitements—alcoholism.
   10. Relation to organic and toxic influences.
      a. Relation to acute and chronic infections.
      b. Relation to epilepsy.
      c. Relation to syphilis.
      d. Relation to mental signs of toxicosis of pregnancy.
      e. Relation to endocrine phenomena.
      f. Relation to hyperthroidism.
      g. Relation to chorea.

11. Pseudocyesis.

C. The puerperal phenomena.
   1. Psychoses determined by previous personality make-up of individual.
   2. Pregnancy as an additional factor for maladjustment.
   3. Special features such as infanticide, painless birth, etc.

D. Mental Hygiene possibilities regarding joint problems in both fields.
   1. Preventive procedures.
      a. Adequate preparation for pregnancy.
      b. Pre-natal care.
      c. Breakdown of superstition and traditional idea of "back through the shadow of death."
      d. Complete understanding of physical aspects of pregnancy.
      e. Preparation for care of child and habit training, etc.
      f. Mental reactions to sterilization and to inability to have children.
      g. Problems of adoption.

F. Indications for abortion and sterilization and contraceptive information.

In later years, there are possibilities of combining the teaching of psychiatry with that in the departments of medicine and surgery to the effect that eventually, I hope, the major portion of our teaching will be carried on through this method.

In the fourth year, there is no didactic work given in psychiatry. The student spends an average of two hours per day for six weeks in the psychopathic hospital. Patients admitted to the hospital are assigned in rotation to each student and he is held responsible for a complete mental examination, progress notes and follow up notes. He likewise attends the regular outpatient clinic. It is estimated that before graduation each student works up fifty cases and many students have reported that they have worked up approximately double this number.

Postgraduate Courses

Each summer postgraduate students, consisting chiefly of internists, neurologists and psychiatrists attend a one month postgraduate course. Last year twelve men attended this course, most of them coming from other fields of medicine than psychiatry.

The most important part of our postgraduate instruction is the training of men who have completed their internships and have been granted a two-year Commonwealth Fund Fellowship for training in psychiatry. There have been numerous applications for these fellowships and these men are chosen carefully. The Fellowship training program consists of the following: First, ward, outpatient and extramural work; and second, studies and examinations of fundamental psychiatric literature as well as current literature. In the definite ward work assigned, the Fellow studies each patient under the supervision of a senior psychiatrist, prepares case reports which are presented in the regular staff rounds and conferences. Here he has the best approach to psychiatry in that he assumes active ward responsibility for all patients assigned

to him. He is also assigned work in the out-patient clinic, especially in the child guidance and community clinics.

As a second part of the Fellowship training program, monthly written examinations are conducted. These examinations are based on a review of the psychiatric literature and of many of the text books on psychiatry. The Fellow is not assigned any reading, and examinations are not conducted until the first six months of training have elapsed. During this time he is expected to be well oriented as to methods of procedure and work. During his period of training the Fellow is given opportunity to take part in the educational program for the community and is especially encouraged to give talks at the conferences with relatives which are conducted at regular intervals in the hospital. Following the conclusion of the second year of training each Fellow is advised to continue in connection with some teaching institution, taking up special clinical problems in accordance with his drive, capacity and interest.

In connection with the training of these men, we are hoping that standards leading to a degree in neuropsychiatry will be established whereby they can be given formal recognition for the work completed following oral and written examinations. At the present time a committee has been appointed by the American Psychiatric Association to establish these standards.

Educational Functions

Work of this sort should be of great value in completing the program for the teaching of psychiatry. The great contribution psychiatry can make is certainly in the educational field. A department of psychiatry has three fundamental educational functions: First, the teaching of undergraduates; second, scientific research; and third, extramural education. To meet these three fundamental functions fully, teachers of psychiatry should meet educational needs in a broader way than we have in the past. For instance, psychiatry cannot be divorced from the field of the social sciences. The dissemination of knowledge from these fields to the field of psychiatry is of vital importance to progress. Likewise, psychiatry in its viewpoint can contribute a lot to the field of social science. The same general dove-tailing with psychology and allied fields is important. There should be a pooling of experiences from all of these fields with free interchange of ideas and research to hasten the time when we can see that the teaching of psychiatry constitutes a necessary part of the whole integrated field of study which attempts to help the individual to adjust to his environmental demands. The modern psychopathic hospital or institute with its facilities for clinical teaching

should contribute greatly to the new era we are now entering in the teaching of psychiatry.

When the present day expectations of psychiatric teaching are realized, we can expect that the general practitioner and internist will have skill and interest in the early recognition of mental disease, that the school physician will have in addition to his ability to diagnose and treat rickets an equal ability in the recognition of personality disorders of children, and that every student will leave the medical school with a workable understanding of the clinical and therapeutic and public health aspects of mental disorders.

Discussion

DR. WILLIAM A. O'BRIEN (University of Minnesota): I visited the University of Colorado General Hospital yesterday afternoon and had a most enjoyable time. I think anyone who goes away without seeing this place, meeting the various members of the staff, is missing a great part of his trip to Denver.

One of the places I particularly enjoyed was the Psychopathic Hospital, and talking with its able director, Dr. Franklin Ebaugh. As Dr. Ebaugh was speaking, I was reminded of a remark made by the dermatologist of our group who came to me the other day and said, "What we really need in dermatology is psychiatric training, as we are dealing with a group of people who are responding badly to skin disorders, such as psoriasis and acne in the young, just as badly as in other types of mental disorder." He made out a whole list and said he wished that he had enough psychiatric training to help these patients in the way they should be helped.

The University of Minnesota hopes some day to approach even in a small way, the splendid work that is going on here at Denver. Anyone who goes away from Colorado without visiting this splendid institution is missing a great deal of enjoyment which this trip has already brought.

DR. B. D. MYERS (University of Indiana): Before Dr. Ebaugh's paper is published will he please add the recommended premedical courses in sociology and psychology that he would like students to have?

The Admission of Patients from Outpatient Department into Hospital*

H. R. WAHL
Dean, University of Kansas, School of Medicine

The problem of furnishing adequate medical care to the low salaried strata of society is causing considerable concern to the public and to many prominent members of the medical profession. In most localities, ample provision is made for the entirely indigent, but for the working man with a family and an income of from $20 to $30 a week, the advent of illness is too often a catastrophe from which it may take him years to recover. Many physicians give freely of their time to aid this type of patient but a surprisingly large number openly discourage such patients or make little effort to provide them the services they require.

The outpatient departments of hospitals should be the means of supplying this need, but here, again, often only the entirely indigent patient is welcomed, while the honest, self-respecting but financially embarrassed working man is blandly told to go elsewhere. Fortunately, there is now a tendency of the outpatient departments to be more liberal and admit those whose income is manifestly too low to provide adequate private medical care. While this provides more clinical teaching material to departments connected with medical schools, it does introduce many delicate problems involving the eligibility of patients, their disposition, should roentgen ray and laboratory study be required, or should hospitalization become necessary, and the charge of a professional fee when an operation is indicated.

The policy used in the outpatient departments in the various schools of the country is quite variable. In most of the schools no professional fees are charged and a patient is either placed entirely on a charity basis, as far as the physician is concerned, or is not admitted into the outpatient department. If he cannot find a doctor who is willing to care for him at a reduced rate that is within his means, he must go without such medical attention. Out of forty-five replies received from a questionnaire on this subject, thirteen outpatient departments were restricted to the indigent patient only, while thirty permitted considerable variation in the fees paid by the patient when admitted into the hospital, this amount being that which the patient can afford, as determined by the social service department or admitting personnel of the hospital. On the

*Read at the Forty-first Annual Meeting of the Association of American Medical Colleges, held in Denver, Colorado, October 14-16, 1930.

other hand, twenty-eight did not permit any professional fees to be charged; three allowed such fees to be collected in exceptional cases; six allowed such fees to be collected as arranged by the member of the staff who was consulted, and five charged a fee that was assessed by the social service department or the admitting personnel of the hospital. In four institutions the fee was paid to the hospital and in seven to the doctor concerned. It is thus seen that in few places does a patient unable to pay the full charges of medical care have any choice but accept charity as far as professional services are concerned. His hospital expenses are often prorated with his income but not with his physician's fees. The method of handling this situation in medical schools is determined to a large extent by their local tradition, their historical background, their economic status and their organization and support.

The University of Kansas School of Medicine is a divided school, the first year and one-half being given on the university campus at Lawrence while the last two and one-half years are offered in Kansas City, Kansas, on a site situated near the state line, in a metropolitan district of half a million people most of whom live across the state line in Missouri. The outpatient department has approximately 50,000 visits annually. About two miles east of this department there is another dispensary, about equal in size, in which only indigent patients are admitted, this being a municipal institution.

The outpatient department is almost self-supporting. A charge of 25 cents is made for each registration, and small charges of from 25 cents to $1.50 are made for laboratory tests, roentgen examinations, medicines and special treatments. No patient is refused treatment because of lack of money. The policy is to require patients to pay something for everything they get, and if they do not have the cash, to give them credit and ask them to pay when they can. Such cases are usually marked "free" on the books but the patient is told that he is expected to pay. This method has reacted better with patients than formerly when entirely "free" treatment was given to all admitted.

The university hospital is controlled entirely by the medical school and has 180 beds. There are seventeen private rooms. All other beds are ward beds, 90 per cent of which are available for teaching purposes. Most of these patients pay $15.00 per week. The legislative appropriation is $150,000 annually for the entire medical plant in Kansas City, including the departments of the school, the outpatient department, the nursing school and the hospital. Of this appropriation, approximately $60,000 is used to support the hospital. The balance is obtained from patient fees. In other words, the state pays about 30 per cent of the

cost of maintaining the teaching hospital of the medical school. There is no provision for free beds, but cases of unusual teaching value and of an emergency type are admitted free so that there are usually from 8 to 10 per cent free patients in the hospital. Moreover, the state has a county law authorizing any county to send patients into the university hospital, which, in turn, charges the counties $12 per week, plus minor, roentgen ray and operating room charges. About 20 per cent of the hospital patients belong to the counties. A large percentage of the hospital patients are referred there by doctors in the state or by members of the hospital staff. About 40 per cent of the patients in the hospital are referred from the outpatient department.

Patients are admitted to the outpatient department on their statement that they cannot afford to go to a regular physician. As the funds are so limited, there is no adequate social service department, and, hence, no attempt is made to investigate the truth of their statement. As long as all patients are utilized equally for teaching purposes, it is not felt that many impose on the outpatient department.

When patients are recommended for admission into the hospital, a much more definite attempt is made to ascertain their economic status. They are questioned on their income, their responsibilities, their dependents, and their ability to pay the hospital expenses and a doctor's fee.

So many delicate questions and so much criticism arose a few years ago, that I decided to interview each of these patients myself. The following is the plan we have had in use the past two years. All patients, except emergency cases, referred to the hospital are interviewed at a definite hour each day. In this interview I determine the patient's earning capacity, his obligations, his dependents, his ability to pay the hospital expenses and his physician's fee. He is then told approximately what the hospital bill will be and how he is expected to pay it. Often an arrangement is made to make small monthly payments. A professional fee is assessed and the patient is told what it will be, if it is felt that he can pay it. If the patient can pay the usual private fees, he is recommended to several competent physicians, and no further care is given unless his condition demands immediate attention. When a professional fee is assessed, the patient is permitted a limited choice of his physician, this being only among members of the service to which he is assigned. The patients rarely manifest any preference, though they frequently want to pay a fee so that they can be sure to get an older physician.

During the past two years, I have interviewed three thousand dis-

pensary patients referred to the hospital for treatment. Of these, 446 (15%) were assessed a professional fee. The total amount of these fees was only $5,995 and was distributed to twenty members of the staff, who received an average of $150 per year from this source. It is also interesting to note that, of those assessed a fee, 360 were tonsillotomy cases. These required such a short hospitalization period that many could afford to pay the doctor a small fee, which rarely exceeded $10. While this was very small, to the patients it seemed large and gave them a feeling that they were paying for services and would therefore get better results and care. As can be seen from these figures, very few patients could pay the doctor's fee if they had a condition which required more than a week's stay in the hospital.

The results of this plan have been reasonably satisfactory even though the method is rather unorthodox and varies considerably from the usual custom. It has given me an intimate contact with the activities of the outpatient department and yet rarely took more than an hour each day. It gave each patient a clear understanding of what his hospital and doctor's fee would be and how he could meet this expense. Furthermore, the fact that he had an opportunity to talk over his difficulties with the head of the institution, instead of some office employee or young intern, often had a good psychologic effect on him.

One of the things that particularly impressed me was the innate honesty and sincerity of the great bulk of such patients. They were so anxious to do what is right. There was rarely an effort to hold back any information on their economic status. Many immediately explained, apologetically, why they came to the clinic and said they hoped the hospital expenses would not be so high that they could pay something to the doctor also. I could not help feel that it would be most cruel to force charity on this group. Of course, there were others, especially those of foreign descent, whose statements often had to be discounted or even ignored.

The placing of a small professional fee was often made to save the self-respect of some who had seen better days but were financially embarrassed. Often, these unfortunates belonged to the so-called "white collar" class who needed encouragement as well as medicine, and to whom the payment of a small fee meant that the doctor would take a personal interest in them. It is true, that patients of this type represent less than 10 per cent; yet they are of such better type and so much more appreciative of what is done that every consideration is due them. The payment of the doctor is more important to them than payment to the hospital, and I am convinced that the usual custom of charging nominal

hospital fees and making no professional charge is equivalent to charging for board and room and forcing medical charity on an unwilling but helpless individual.

Frequently, patients from far out in the State would come in for diagnosis and treatment and have very erroneous ideas of the speed with which diagnosis and effective treatment can be instituted. Such impressions were corrected in these interviews and much misunderstanding and fancied neglect obviated.

Occasionally, patients come to the outpatient department, after spending a small fortune on unsuccessful treatment, with a most cynical impression of the medical profession, and have a correct diagnosis and beneficial treatment given for a nominal fee within their means. Such patients are most grateful and often go back to their family doctor with renewed faith in the profession. Such patients would go to charlatans in their first frame of mind rather than to a private doctor.

Again, there are patients who have spent large fees without results and, being tax payers, insist that they have a right to go through the clinic for treatment and pay a reasonable fee. They cannot understand why they must go to a private physician, and it is easier to let them go through the clinic. Often, before they leave they become strong supporters of the clinic and recognize the wisdom of going back to their local physician. It is true that sometimes they fail to return to their doctor, and if what they say is true they should not do so.

Patients of the better class often regard the outpatient department as a place where they can check up on their doctor's work and where they can resist the occasional attempt of a physician to frighten them into paying a fee entirely too large for their economic status. Occasionally, embarrassing questions about high fees arise and it is difficult to avoid incriminating a physician when everything shows that he is entirely too high in his charges.

The following is almost a daily occurrence: A woman of more than usual refinement goes to the nose and throat clinic with her 7 year old child. The child's tonsils are enlarged and she is given a card for hospital admission. Her husband has irregular employment and when working makes $4 a day. There are two other children. She has never been compelled to accept charity before. Her child was sent home by the school nurse with a note stating that she could not be readmitted until the tonsils were removed. The mother went to another free clinic but was refused admittance because at that time her husband was employed. She went to two local doctors who told her they would do the work for $35.00 and $50.00, respectively, not including the hospital bill.

With an income of less than $90.00 per month she could not possibly afford this. She wanted a private doctor to do the work and not be a "charity" case. She could scrape together $10.00 for the doctor's fee and was overjoyed to learn that we could arrange this for her here. This also affords a striking example of injustice in the way in which schools force children out because of physical defects which the parents are financially unable to correct and for the correction of which neither the schools nor the city authorities afford proper facilities.

The plan we have used is not perfect. It has some faults and in some respects it is impractical. Manifestly, it takes too much of my time to keep it up indefinitely, and I should delegate this duty to some one else. I have done it to get direct contact with the patients' problems and to learn more of what is going on in the clinic.

There is some question as to the wisdom of turning the professional fees collected over to the members of the staff involved. Many feel this should be turned into a special fund to be used to improve the facilities of the clinic. There is also considerable criticism of the practicing physicians that we are underbidding them. The only answer is that the maintenance of a standard rate is not for the welfare of the community and often causes untold anguish to the patient who does not have enough money to pay the average price. Moreover, as a state institution we owe some consideration to the voters of the State, and as a medical school we derive additional clinical material. Furthermore, the total amount of money involved is so insignificant (less than $3,000 annually from 50,000 visits) that none can say this is injuring the practitioners' business or that the staff members find this very profitable.

The plan is, of course, experimental. It could not be successful without the support of the medical staff. Some of the staff are opposed to it but the great majority favor it. In other institutions with different local conditions it probably would not be as successful.

DR. C. R. BARDEEN, University of Wisconsin: This is the kind of paper I like to hear because the actual conditions that are being met in a given institution are described. We have not quite the same conditions at Wisconsin. Madison is a relatively small town of 50,000 or 60,000 population. We do not run an ordinary outpatient department. Our outpatient work is essentially in the nature of a consultation clinic. The patients are referred by social workers or by physicians. We have a considerable number of patients there each day and the clinic is rapidly growing. As a rule, there is no regular fee for the patients referred to the clinic, and we have no established charge for those who can afford to pay something for professional services.

In the first place, those who are referred to the clinic for this work are referred by private physicians and by social workers. Patients admitted to the

hospital, including the outpatient department, are referred on one of three bases. If they can not afford to pay anything their physician or social worker consults a county judge; county papers are issued and they become charges at the joint expense of the state and the county. The State pays for their care and one-half is charged back to the county.

If patients can afford to pay $5 a day for hospital care but cannot afford specialist fees, they are sent in as clinical patients. If they can afford to pay for professional services and are sent to the hospital, they pay for a private room, and professional services in addition. Our facilities for private patients are limited. The charge for professional services is made directly by the physician in charge of the case.

While we have not quite the same conditions that Dr. Wahl has, I have thought for some time that we should ultimately have to meet similar problems. Personally, it appeals to me very much to have every patient given an opportunity to pay something. It helps him to keep his self-respect. Even when a patient is a joint county and state charge, in Wisconsin, he is expected to pay back to the county as much as he can of the county's share, if he gets in position to do so.

We have made no hard and fast distinction between our outpatient department and the hospital wards. The outpatient department is essentially the consultation clinic for the hospital.

Dr. Beverly Douglas, Vanderbilt University: I do not think our plan differs very essentially from the one that has been outlined, except that it is not as efficient in determining the patient who is able to pay a small fee to the physician looking after him. I think a great many are missed in this category and for this reason we are rather encouraging charity which is not of the best type.

Dr. A. C. Bachmeyer, University of Cincinnati: I was greatly interested in Dr. Wahl's paper because this subject often presents troublesome problems.

We hear almost constant complaint on the part of the medical profession, as voiced particularly by county societies, concerning the socialization of medicine, state medicine, the abuse of medical charity and the admission of patients to organized clinics without proper investigation or control.

I should like to know whether there are any men here from localities in which the county medical society has taken any active part, in a constructive manner, in the outpatient clinic work of the community.

It has been my experience, when working with men who were actively practicing medicine and who complained of conditions, that when they "got inside" and learned how these clinics and medical charities were conducted, they ceased their complaints and usually became ardent supporters of the clinics, but, except, probably, the Kings County Medical Society in New York, I have yet to find a county medical society that has shown a very active or progressive or constructive attitude toward the whole problem.

It has always been rather surprising, when talking with dentists to learn of their entirely different attitude toward the "clinic" problem. Dental clinics, operated in connection with dental schools, particularly in former years, were often a source of considerable profit to those schools or at least a source to which the school looked for a large portion of its financial support. Very little gratuitous service was rendered in such clinics and the fees charged compared favorably with those charged in private practice. Yet the dentists seemed to

accept such activities on the part of their schools without complaint and usually have argued in support of the practice.

When recently a proposal was made in Cincinnati that the University establish a Dental Department it was said that a large endowment would not be necessary because the earnings of the dental clinic would, in large part, support the venture. This is quite different from the attitude we meet in the medical profession.

I do not believe that medical charity is abused to any particular degree in Cincinnati. Studies made elsewhere indicate that ordinarily one can expect from 2 to 3 per cent of abuse. We have no provision for charging professional fees. Our hospital, being a municipal one, is intended primarily for the care of the indigent and no special provision is made for pay patients. An investigation is made in each case and an endeavor is made to collect for service rendered according to the patient's financial ability to pay. In the clinic, a small admission fee is collected and other minor charges are made for drugs, dressings, etc.

If the patient is found to be able to pay for professional service, he is not accepted but is referred to a private physician.

It is possible in Cincinnati for the patient to secure hospital service at a lower cost in some of the private hospitals than in the municipal institution; he can obtain service in this manner and then pay something to the physician.

The conditions Dr. Wahl described are frequently encountered. A physician states that his minimum charge is "so much and no less. I will perform the service for that price or for nothing, but I will not cut my price." This attitude seems to be a defensive one against his colleagues' criticism that he is cutting his prices.

The time has arrived when organized medicine, as represented by our county societies, should actively participate in the "social service" and "medical charity" programs of our communities. I do not believe that these questions of proper medical service to the poor and more especially to people of moderate means will ever be solved until organized medical circles get busy and actively participate in the work.

Dr. Maurice H. Rees, University of Colorado: In answer to one of Dr. Bachmeyer's questions, I may say we have a committee of the medical society which we term the advisory committee to the School of Medicine and hospitals. The committee has not been functioning long enough to say how efficient it is going to be.

We have also had some interesting experiences locally in attempting to refer to local physicians patients who might be able to pay a small fee. I remember two instances in which obstetric cases were referred to local physicians with the statement that the patient could pay $25 or $30 for the delivery. Both these physicians sent the patients back to us with the statement, "We do not do charity work."

Dr. James P. Kerby, University of Utah: In Salt Lake City we have a definite fee schedule. It was made definite more with the idea of preventing patients from shopping around. I do not know if in your communities it is as prevalent as it is in our town. It is certainly very prevalent there.

For instance, a patient will go to a doctor for an appendectomy, and the doctor says, "My fee is $150." The patient does not make any special claim for concession because of financial circumstances. The patient goes to another

doctor and says, "Dr. So-and-so said his charge would be $150. I can not afford to pay it. Can I get it done for less?" That doctor may say, "I will do it for $125." The patient will shop around. Probably the conclusion will be that he will get it done for $50.

We recently got a new fee schedule through and one of the provisions is that if any member cuts his fee merely to steal the patient, ipso facto, he becomes liable to losing his membership.

In our community, I think the vast majority of doctors will do an operation or treat a patient for anything he can afford to pay, provided he is convinced of the honesty of the patient and his financial status, rather than see the patient go to the county hospital.

In the county hospital they have a social service which is trying to get, if I might use a slang expression, the "low-down" on patients. If they find that a patient is not able to pay, one of the staff men gladly does the work. If the patient is able to pay, they refuse to do it. For instance, on the nose and throat service, it is not unusual for the nose and throat man to do twenty tonsillectomies in a morning on patients turned in by the social service as being deserving of care.

Dr. Alfred Owre, Columbia University: I doubt very much whether dentists are less hostile to the clinic idea than physicians. The University clinic, at least, is often in for quite a little criticism. In one section of the country we have even had resolutions passed by an organized dental society condemning a university teaching clinic. There is a strong, well-organized opposition to the clinic idea in dentistry.

Dr. H. R. Wahl, University of Kansas: We have had some opposition to this plan. I might tell you about our geographic situation. We are right near the state line, the larger city is in Missouri, and a large group of doctors live on the other side of the line. They have not anything to say about what goes on in Kansas. Consequently, we can go our own way. But it will interest you to know that a few of these doctors have taken the matter up with their friends on the Kansas side of the line to stir them up, to see if they can not stop us from carrying on this "nefarious" activity. They feel our attending men are making an enormous income. They average about $150 annually. To hear them talk you would think they were making $15,000 or $20,000 a year. Some of the men on the Kansas side have complained, but this was done usually through lack of proper information.

I have talked to a number of the men in the county society, and after I have explained what is done, they have seemed to be well satisfied. Some are not always convinced but they are usually silenced. There is not anything they can offer that is better than the method we use.

As far as abuses are concerned, I do not think that the clinic is abused very much. We subject those patients to a certain amount of indignities. They have to sit there and wait. They have to be subjected to demonstration, and many people will not remain in a clinic and wait three or four hours for their turn. We do that deliberately to discourage anybody from coming there unless they are unable to pay the usual fees.

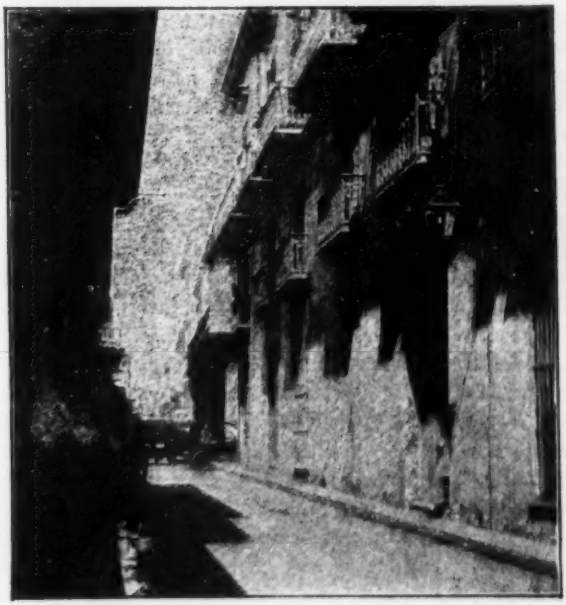
The matter of shopping around is rather an interesting question. If there is anything that irritates me it is to have a patient come in who is shopping around. Some of my questions are designed particularly to see if that is happening. If it is, the patient is told to go to his private doctor. We do not

have many patients like that. If we have any suspicion that they are shopping around, we do not give them any consideration.

Most of the patients are absolutely honest in what they are trying to do and in their purpose in coming to the clinic. That is one thing that has impressed me particularly, that these patients are not trying to put anything over. We have a certain foreign element whom we cannot trust. The foreign element in Kansas City is not large, which may be one reason why we do not have many of that type trying to beat the profession.

Dr. Rees mentioned two cases which illustrate the same thing we have had happen again and again before we took over this plan. We find that a patient can pay a small fee, and we send him to a doctor, and the doctor sends him back. He is insulted with the idea that we have sent him a charity case. He will not do it. We have resorted to this other method which seems to be working out fairly well.

There is one point which I wish to emphasize again because I get this from contact with the patients, the patient's viewpoint. It is very important in taking care of patients coming to the clinic not to destroy their self-respect. That is the main fault I have to find with an indigent clinic. A city or municipal institution is different. Other institutions not operated by the city ought to take consideration of the person who wants to pay something but is not able to pay the usual fee. They would be treating that patient's self-respect as well as his physical condition.



Street Scene in the Old Section of Havana.

On Teaching Urology to the Undergraduate Medical Student

MONTAGUE L. BOYD
Head Department of Urology, Emory University Medical School
Atlanta, Georgia

From attempting to teach urology and the other specialties in too great detail to the medical student, there is a tendency in medical education to go to the other extreme and leave the teaching of some of the specialties out of the curriculum.

Certainly, as far as urology is concerned, this is a mistake, for the student must know certain parts of urology to make his undergraduate education complete. And it is better for the teaching to be done by the urological department because, if for no other reason, teachers of medicine and general surgery do not have the knowledge of urological diseases which would enable them to perform the task as well as the urologist.

If we accept that well recognized principle of education that in all learning we, for greatest efficiency, pass from the concrete to the abstract, we, then, have to approach the teaching of the specialties from a different viewpoint from the one which is now held. Dr. Rappleye[1] says of the present tendency in education: "Reacting to the obvious fact that no individual can master all phases of medical knowledge the various courses are being made introductory in character with emphasis on principles, leaving the training in technical methods and details to be obtained later on in the course or provided as postgraduate training." Dr. Rappleye and the other authorities on medical education, who appreciate the necessity of applying the accepted principles of education to medical teaching, no doubt recognize the error involved in making that change.

The specialist becomes a specialist by mastering the details of his particular line in so thorough a fashion that he develops increasingly the ability to understand the laws (principles) which cover larger and larger groups of cases. The medical graduate, however, needs to know (whether in detail or in general) only a small part of what the specialist knows because he intends to do but a small part of the work performed by the specialist, but, as I have said, he must know some urology and that part he should make every effort to perform just as well as it can be done.

1. W. C. Rappleye: Proc. Annual Congress on M. Educ., etc., 1930.

What Should be Taught

The third year student, having received for two years a training in anatomy, physiology, bacteriology, pathology and clinical pathology, sufficiently thorough to encompass, in a fashion, both the concrete and the abstract, is ready to undertake the study of the various diseases from a general medical point of view. If, during these two years, he has been systematically taught the things which he will need to know in connection with his work for the third year, he will already have learned, when it was easiest to learn, things about the genito-urinary tract and its diseases which will greatly facilitate the teaching of urological diseases. For example, he will know the necessity of examining fresh urine; of examining in the male more than one glass of voided urine so as to avoid the error of suspecting cystitis or pyelitis when there is only a urethritis present; he will know how necessary it is in searching for infection in the urine of women to employ for the most part a catheterized and not a voided specimen; and he will know something about the origin of pus and blood in the urine.

During the third year the student's urological acquirements should consist of concrete knowledge of a selected list of urological diseases. This study should comprise a detailed study of all the facts concerning the diseases selected for presentation to the students, and the study should be taken up as the diseases appear in the patients which are assigned to the student for investigation. To enable all of the selected diseases to be covered suitably it will be necessary for each student assisted by the instructors, to present before the other students, at a conference or clinic, such patients as are needed for this purpose. In time, the student's knowledge will comprise the details (concrete) of a sufficient number of diseases to enable him to begin generalizations and so acquire that broader understanding of disease (the abstract knowledge) which is possessed only by those who have first acquired a more or less extensive knowledge of the concrete.

The Diseases to be Discussed

The most frequently encountered diseases of the genito-urinary tract, and, therefore, the ones which the undergraduate needs to study, are according to statistics made on my private cases as follows: urethritis, urethral strictures, prostatitis and seminal vesiculitis, nephritis, nephroptosis, urinary tract infections, urinary calculus, urethral stricture, chancroid, benign prostatic enlargement, and cancer of the prostate, and tumors of the bladder and kidney.

If sufficient data were available concerning the diseases which the physician encounters in his private practice, and in the charity hospitals

and clinics, we would know more exactly what to teach undergraduate medical students. For we now recognize, I believe, that what a graduate from a medical school needs most to have learned are the things which he will need to employ after he graduates, and that his time is much better consumed in learning the specific things which he will need to know rather than to attempt to train his mind by working with things which he will not actually use.[2]

If we knew exactly what knowledge the student was going to need after graduation, we could come most nearly preparing him for that time. Since we cannot know this exactly and since the curriculum must be prepared for the group (the class) rather than the individual, we must, of necessity, include and leave out what otherwise we might exclude or include for separate instruction for the individual.

Teaching Urology in Other Departments

It would be possible for third year urology to be taught by men in the other departments—principally, of course, general medicine and surgery—if it were not for the fact that there are certain urological diseases which, though frequently encountered and treated by physicians who are not specialists, still are much better understood by the specialist. This is necessarily the case in almost any branch of medicine where the volume of current literature is so great and the advances so rapid that only the specialist has any chance to keep abreast of the times. In the fourth year, at least, part of the instruction must be given by the urologist, for in the latter part of the fourth year that abstract knowledge, the knowledge of principles which is essentially the property of the urologist, should be presented to the student in an attempt to show him how urological diseases follow the principles which control other diseases of the body and must always be considered with all the other organs of the body and its diseases.

However, some of the third year teaching of urological diseases must be done by the medical and surgical departments because, first, both medical and surgical patients will be encountered having urological symptoms or lesions as well as medical or surgical lesions, and, second, in other patients the symptoms or lesions of the urological tract will be found to belong to that group of diseases which is not distinctly urological but part urological and part medical or surgical, or, perhaps, may belong to either; such, for example, as albuminuria or nephritis. Under any circumstances I do not think that we should, as far as the

2. Dr. Glenn Frank says in "The New Education": "Learning is specific rather than general." "We now know that very little automatic transfer of training takes place." "We now know that the best education consists in learning what we need in the form in which we need it."

third year student is concerned, emphasize the connection of the disease with the specialty to which the disease belongs, but attempt to teach him, as fairly as possible, the details which he should know, employing, however, the urologist as an assistant in giving the special knowledge which is needed.

Teaching to be Done by the Urologist

As I have pointed out, there are a certain group of diseases which must be taught exclusively by the urologist. The most evident one is gonorrheal urethritis and its complications and sequelae. So that the third year student must spend part of his time in the urological department in studying and treating those diseases as well as in following up the urological investigations which were begun on the patients assigned to him in the general medical and surgical departments. For if the student is to learn the concrete facts about diseases when it is easiest for him to learn them, at a time when he needs to know them most, when his interest in learning has been stimulated by having to solve the problem of making a diagnosis of the disease or diseases to be found in the patient assigned to him, then he must follow the patient through all the procedures which are performed to make a diagnosis and correlate the significance of the findings and information which he has obtained in his consultations with the different departments.

It is my experience that the vast majority of mistakes in diagnosis in medicine are made through an absolute failure of the physician to make some examination which was necessary. And where such failures are common, it must be due, in a large measure, to a failure on the part of medical schools to train the student thoroughly in the knowledge of what examinations can be made to discover the existence of the disease and its cause, and in the necessity of having these examinations made, and how he can go about having them made when he does not possess the skill and knowledge which would enable him to make them. Other failures in diagnosis are due to the mistaken idea of the physician that an examination which he has made or which has had made by some one else is sufficiently accurate and sufficiently thorough to give correct results. Such a misconception could not occur to a man whose training included doing and seeing carefully what was done for each of the patients assigned to him.

Need for Follow-up Work by Student

It is much more likely that the student will be trained properly by following his patient through all of the examinations made on him or her than by being told that certain consultations are necessary and dis-

missing his patient for the time being until the information is acquired. Such an interruption must make it difficult for the student to maintain the necessary enthusiasm. I find in my own work that the longer the interval between visits, during the time that I am carrying on my initial examinations, the more difficulty I have in rekindling my interest in solving the patient's problems. If, however, my examinations are not interrupted from day to day, my interest remains uninterrupted.

Rearrange Conduct of Outpatient Clinics

To carry out such a plan means, of course, a rearrangement must be made of our present scheme of conducting outpatient clinics and disposing of the student's time. It will necessitate the operation of the outpatient clinics for medicine, surgery and the specialties during the same hours; limiting the number of patients assigned to students; and require the treatment of patients in the clinics which are never assigned to the students when they do not have the necessary teaching value.

After all, there are a great many patients coming to a charity clinic which are of no real teaching value because of the disease they have, or because they are stupid, uneducated, or silly. The students' time is too valuable to be wasted on such patients. They should be treated by the clinic staff. The patients better suited for teaching purposes should be assigned to the students. It would seem that, on the whole, a part pay clinic might afford better teaching material for men expecting to go into private practice and hospital work than a full charity clinic.

Resumé

In brief, then, the instruction given the third year medical student by the urological department should consist of: (1) Assisting the general medical and surgical departments in their instruction concerning urological diseases by carrying out urological investigation on patients from these departments, and explaining in detail what was being done, the results obtained, and why. (2) Giving concrete instruction to the student on certain selected urological diseases.

In the fourth year such instruction should be supplemented by urological ward rounds and work by the students on patients in the urological department. At that time the urological patients should be followed into the other departments for extra urological work and consultations, as the medical and surgical patients are followed in the third year. And a small number of lectures should be given in the latter part of the fourth year treating the subject abstractly and emphasizing the connection of urological diseases with pathology in the other organs of the body.

The Curriculum*

WILLIAM D. REID
Boston

In 1923, the Association of American Medical Colleges adopted the report[1] of its Committee on Education and Pedagogics (Drs. Hugh Cabot, Ray Lyman Wilbur, A. S. Begg, E. P. Lyons, and Walter L. Niles) on the hours to be assigned to the various subjects taught in medical schools. In 1927, Fred C. Zapffe[2] proposed a new curriculum based on the prior report. I have analyzed, for the assistance of the Committee studying the curriculum in our Medical School, the assignment of hours in the American schools of medicine. The data were obtained from their catalogues. It is believed that the figures obtained in this study may be useful to others; they are given in the accompanying table.

Comment

The footnotes to the table are important in interpreting the numbers given above. The analysis is based on 65 medical schools (the remainder were requested but not received); some were not suitable for this analysis as the time allotted to the various subjects was stated in units, rather than hours, and, therefore, they could not be compared with assurance as to accuracy.

The curriculum in the medical schools of America has been criticized in that it was said to have become excessively standardized. It is my opinion that this criticism cannot be accepted without reservations, for study of Table 1 discloses a wide variation between the minimum and maximum number of hours allotted to the various subjects. Consideration solely of this time factor supports the assumption that the various subjects are not taught in identical fashion in the various schools of medicine. Does not the wide variation between schools, as disclosed in the table, give comfort to those of us who disapprove of excessive standardization in medical education?

The reader who is interested in further information on the curriculum is strongly urged to read the excellent article by Zapffe[2]. It contains much constructive material that is not found in Table 1.

*From the Boston University, School of Medicine and Evans Memorial.

1. Proceedings of the Thirty-third Annual Meeting of the Association held in Ann Arbor, Mich., March 2-3, 1923.
2. Zapffe, Fred C.: A Proposed New Curriculum, Bull. Ass'n Am. Med. Colls., 2:322, Oct., 1927.

TABLE 1. CURRICULUM OF 47[1] MEDICAL SCHOOLS
(Required Courses)

Courses	No. of Schools	Minimum Hours	Maximum Hours	Average Hours	A.A.M.C. 1923	Zapffe 1927
1. Anatomy	47	480	1185	780	471-814	566
2. Physiology	46[1]	187	674	268	151-264	180
3. Biological Chem.	47	153	384	234	118-198	144
4. Pathology	47	170	548	376	337-572	300
5. Bacteriology	47	108	352	193		130
6. Pharmacology	47	100	316	196	135-220	180
7. Pub. Health Prev. Med. & Hyg.	38[2]	30	298	86	101-176	128
8. Medicine	38[2]	472	1040	761	673-1166	900
9. Pediatrics	38[2]	24	384	158		
10. Neurology and Psychiatry	38[2]	48	314	130		
11. Dermat. & Syph.	38[2]	11	135	64		
12. Surgery	37[1 3]	375	872	586	437-770	540
13. Orthopedic Surgery	34[3 4]	8	140	51		
14. Ophthalmology	31[3 5]	4	105	52		
15. Otology & Laryngology	31[3 5]	4	105	58		
16. Obstetrics	30[6]	80	278	176	135-220	170
17. Gynecology	30[6]	33	294	105		
18. Electives	13[7]	80	520	248	808-0	360
Total Hours	38[1]	3579	5668	4354	3366-4400	3598

1. Eight schools give 2 yrs. courses; 39 give 4 yrs. courses (1 does not state hours allotted to physiology or surgery, therefore total hours are given for 38 schools).
2. One school omitted; it combines Courses 7, 8, 9, 10, 11.
3. One school omitted; it combines Courses 12, 13, 14, 15.
4. Four schools omitted; they do not state hours.
5. Seven schools omitted; they combine Courses 14, 15.
6. Nine schools omitted; they combine Courses 17, 18.
7. Fourteen schools require electives. One not included because electives were stated in units.

Council on Medical Education and Hospitals
American Medical Association

Resolution on Graduation of Unqualified Students

WHEREAS, The recently published survey conducted by this council discloses a wide discrepancy in the policy of approved medical colleges toward students repeating the work of the previous year, and

WHEREAS, Superficial investigation of the history of a few said students and one notably liberal institution reveals obvious unfitness in the former, and undoubtedly low standards of teaching in the latter, and

WHEREAS, Medical schools regularly permitting more than an occasional student to repeat his previous year's work are frequently contributors to the problems facing this council which originate in commercialism; therefore, be it

Resolved, That the Council on Medical Education and Hospitals pursue to its logical conclusion the investigations begun in regard to "repeaters" among medical students to the end that unqualified students may not be graduated and commercially tainted medical schools may thereby be disorganized.

Correlation Between the College and the Medical School*

HOMER BLINCOE
Professor of Gross Anatomy
Emory University School of Medicine

(Continued from page 226, July issue)

But even in the vernacular, an understanding of Latin would be useful in etymology. A knowledge of the meaning of roots, prefixes and suffixes would be of immeasurable aid in learning the five thousand terrible new terms. And here is where Greek, too, becomes of importance for while many of our words are derived directly from the Greek, a great many of those directly derived from Latin have a Greek origin. Also, many coming to us from other languages have a Greek foundation. One authority believes[13] that 50 per cent of English words have a Latin or Greek source. The terminology of all biological science is in Latin form but its roots are Greek. Some understanding of the Greek root words would surely help in associating the name with the object. Even the fundamental courses would give this aid and would come under Dr. Little's classification of equipment courses[6] but which fundamental courses the college does not require for a degree, nor stress as to value.

Professor Smeaton agrees[14] with the above reason and in addition urges premedical students to study Latin because "the subject cannot be mastered without inculcating habits of industry, thus furnishing an excellent intellectual discipline."

A study of the classical literature in translation, even, would be a benefit in enriching the meaningfulness of our tongue. If there is reference to a disease as being protean in its manifestations or to a symptom as being a caput medusae, how much more impressive are the words if the classical allusion is understood. Similar examples could be multiplied. It will be observed that all that I have mentioned concerning Greek and Latin has been strictly utilitarian. Much more could be said for them under the head of culture and I hope it may be said by some one in the proper place.

IV

It is claimed authoritatively that men who enter medicine are not

*Read before the Emory chapter of the American Association of University Professors, March 28, 1930.

13. R. C. French, On the English Language, Past and Present.
6. C. C. Little, Bull. Am. M. Colls., 1, p. 39, 1926.
14. Wm. G. Smeaton, J. Assn. Am. M. Colls., 5, p. 146, 1930.

trained in initiative. The third report of the Commission on Medical Education states[2b] that "a common characteristic of medical students is their lack of intellectual self-reliance and independence, traceable to some of the defects in methods of teaching in college." Under this heading criticism is directed toward the lecture method in which nothing is required of the student other than to give back, at set examination time, parrot-like, more or less of what he has been offered; and toward its close relative, the method of "page, line and paragraph" assignments; or toward the laboratory course where the only sequel to an experiment is to copy in a note-book the expected results itemized in the laboratory guide. The untrue contention that the novitiate in medical school is tossed by us into the cold depths of the course, unaided, to sink if he does or swim if he can, must seem wholly true to one whose hand has been guided in every movement in his college course and who has turned out meal only from the grist poured in.

V

It is frequently said that men are presented to the medical school for entrance who should not have been offered. Many studies by the Association of American Medical Colleges tend to show that there is extreme difference in actual value between corresponding marks at different colleges. This is so well known and realized that committees on admissions seldom accept men from certain schools, regardless of grades. The condition also exists within a school. It is common knowledge among students that it is easier to make a good mark in one particular department than in another. Even in important departments where there are several divisions of a class it is known by the students that in one section the marks will be higher than in another section.

One medical school dean, commenting on the fact that the percentage of failures in the medical course is on the increase, says,[15] "This may be due, in no small part, to a change in standards of evaluation of work done in medical schools, but in addition there is undoubtedly the added factor that more mediocre students have succeeded in getting just a little farther along in their educational career and have finally filtered into medical school."

I recognize that there may be large difficulties in the way of arriving at equality of rating men but as long as admissions to medical school are made largely upon the basis of the college records, it is a defect if an "excellent" rating in one college or department is equal to an "aver-

2b. Third Report, Commission on Med. Ed., p. 38, 1928.
15. A. S. Begg, J. Assn. Am. M. Colls., 4, p. 193, 1929.

age" rating only, in another. More than once I have had students explain some fellow student's "C" average in college by saying that he had taken such and such "crip" courses in order to win "B"s to average his "D"s in order to be accepted for medical entrance.

It is known that students seldom fail in some courses, no matter how poor some of these students may be. I have had teachers in college tell me that they would regularly give a failing man a "D" rather than interfere with his graduation or rather than be bothered with him as a repeater, their consciences being satisfied by the reflection that the grade would carry no quality points necessary for graduation. As much as I may sympathize with either of these two reasons, I can see how this would keep an "F" off a weak man's record and would average with a "B" in a "snap" course to let an unfit man into medical school with a "C" average.

The defect I am particularly pointing out is that of loose marking which allows such men to come to a medical school where they are likely to fail or, which is worse, to muddle through to become low grade physicians. For, while it is not evident that the highly rated man will necessarily lead the classes in medical school, it is accepted as proved that the low men from college not only will not lead but that the failures will come chiefly from this group. There would be fewer failures in the medical courses if some of the weak students appearing with "C" averages had received their rightful "F"s in college. I deprecate the irregular rating in general and the untrue rating in particular.

VI

I have referred to some of my information as having been gained from medical students. Some part of the foregoing criticisms has sprung from that source, but the most frequent charge made by medical students, not only in their first year, but after, is that their college work was not so conducted that they were impressed with it as being important. Literally dozens of them have told me that the only idea they seemed to gain was that it was necessary to "get by" which could usually be done by "cramming" the night before examination. Numbers have testified that if they had been present in class and then "crammed" for the examination, they had expected and had received "B" or "C" without studying during the course.

Most of these have volunteered the statement that if something had been required of them they would have produced more and they would have been benefited in the medical work. Under the status quo they were not trained to study and to appreciate the value of their col-

lege courses but, on the contrary, were confirmed in habits of idleness and irresponsibility which subsequently interfered with their adjustment to the work of the medical school. Many have epitomized this by saying that the college work was made too easy.

As a concrete instance, I asked the members of the freshman class to indicate what deficiency, either of subject matter or of management, in their recent college course they had by this time recognized. Of twenty-six who criticised faculty methods and management, seventeen said that the work was not hard enough. This number is 38 per cent of those who made any criticism at all, or over 65 per cent of those criticising management. Seven made varying criticisms of the general trend that the college work was not well related to the medical work, either because of the kind of courses in which they were allowed to register or because of poor direction by the teacher. This is somewhat related to the charge made by the seventeen. Four others made the significant observation that the content of the courses was too little foreknown by them when registering for electives so that they were not able to choose wisely. Their answers were based on their experience thus far in their course (six months). At this turn of the wheel when the current agitation urges that so much should be left to the capable judgment of the medical student, not only as to what he will study, but whether, his recommendations as to premedical study should be given especially weighty consideration.

Summary

1. The college does not give the desired cultural background. I have based the charge upon the claim made by college men that training is for the development of culture. I grant that if that is not its purpose the charge is not just. One medical dean believes[16] that culture is acquired at home and from associations and from environment early in life more often than in college.

2. Standards of grammar and rhetoric are not maintained. I recognize that some of this language deficiency, perhaps grammar, may be charged back to the preparatory school but it must be remembered that all who apply to the medical school have been passed by the college and have credit for English composition. Bearing this stamp of approval, the college must accept some of the responsibility.

3. There is lack of training in etymology, coupled with which the omission or slighting of Latin and Greek are to be deplored.

4. The lack of initiative and intellectual self-reliance is traceable

16. W. C. Davison, Bull. Duke Univ., 2, p. 22, 1930.

to some of the defects in methods of college teaching. It is allowed by the Commission on Medical Education that part of this failing may reach back to earlier-than-college training for its cause but here again the college seal has been impressed.

5. There is careless and unequal rating of college students which results in errors of admission to medical school. Probably realization of this condition is connected with the fact that more and more the medical schools are asking for evidence of qualification in addition to registered standings.

6. Students are not taught the value of college attendance nor trained in methods of study. The students themselves voice evidence of this.

• • • • •

No account has been taken of the growth of the junior colleges whose graduates have not offered in appreciable numbers as medical matriculates. In the future years there will doubtless be problems arising from that source. Also, it is realized that much can be said on the other side, but the subject does not include how the medical school fails to fit in with the collegiate preparation, although I have been the recipient or receptor of much in that connection.

Council on Medical Education and Hospitals American Medical Association

Resolution on Intern Training

Resolved, That acceptable medical colleges should assist all of their students in obtaining intern training, and that after the academic year 1933-1934, all acceptable colleges complete arrangements so that each annual announcement will contain a record of the hospital training of the graduating class of the year before.

Classification of Foreign Medical Schools

Resolved, That the Council on Medical Education and Hospitals make a classification of foreign medical schools where students of American citizenship are in attendance, along the lines applied in the classification of American medical colleges.

Postgraduate Medical Instruction in Hungary*

G. DE TAKATS
Northwestern University Medical School
Chicago

It is universally recognized that postgraduate courses offered by real teachers fill a need of the general practitioner who tries to keep abreast with medical progress or who is endeavoring to specialize after several years of general work. While a number of postgraduate schools exist in this country, and some of them offer comprehensive and well organized courses, the problems confronting the doctor who wishes to get more than a few lectures, or sit in the amphitheater and watch a few operations, are formidable.

It was thought to be of interest to describe postgraduate medical work in Hungary, where early organization and state support have built up an efficient system, a system which of course is not applicable to conditions in this country, but which shows the results of a concentrated, organized effort of the state universities to maintain and raise the level of their graduates.

Postgraduate courses took a modest start in the so-called summer courses, which were arranged at the two universities—Budapest and Kolozsvar—during the vacation months, July and August. They started in 1883, and were frequented by approximately one hundred doctors annually. Thus, between 1883 and 1904, more than one thousand doctors took part in these courses. They were given by the professors of the two state universities, gratuitously.

In 1908, Professor Emile de Grosz submitted an outline to the Department of Education (Ministry of Public Instruction) on the basis of which a Central Committee was formed. Its members were selected from the State Department of Education, and from the faculties of the two state universities. The object of this organization was to (1) arrange postgraduate courses for doctors, including those in the Army and Navy, (2) to organize local committees in larger cities, thus decentralizing the courses and bringing them closer to the rural practitioner, (3) to edit a journal solely published for systematic reviews of newer developments by outstanding clinicians.

The cost of this scheme was to be borne by the Ministry of Public

*This brief communication is based on ten years of personal experience in postgraduate teaching between 1915-1925. The recent data are based on the official Bulletin of the Postgraduate Committee.

Instruction, partly by charging it to the state budget and partly by a specially created endowment fund.

During the last twenty-five years the following types of courses have been employed successfully.

1. Courses of two weeks duration, mostly dry clinics on various topics of general interest. These were modeled on the basis of the original summer courses.

2. Courses of four weeks duration for not more than six doctors in each group. These are held at the university clinics and the participants take part in the whole day's work. The men receive financial aid from the Committee either in the form of stipends (from $25 to $50 a month covers their expenses) or by receiving board and room in some of the Institutes at the expense of the Committee.

3. Courses of two weeks duration for public health officers on public hygiene and bacteriology.

4. A suitable number of one week courses in the minor specialties.

5. With the cooperation of the local committees in the larger rural communities, postgraduate courses of from six to eight weeks duration are offered, but the lectures occupy only one or two days a week so that the country practitioners may easily attend without neglecting their work at home.

At the present time, about $10,000 a year is available for the Committee. The periodical "Postgraduate" comprises from sixty to eighty sheets annually and has published during the last twenty years more than a thousand articles by competent authors.

In 1929, 394 doctors took part in such courses. In 1930 and 1931, courses were planned not only at the seat of the universities, but also in the better equipped hospitals of rural communities, which greatly increased registration.

As the total number of practicing physicians in present Hungary does not exceed 7,000, of whom more than 3,000 are located in Budapest, it may be said that about 10 per cent of the doctors outside of the capital partake in such courses annually.

The program for 1931 is more extensive in scope than ever. Aside from general topics, it offers courses in physical therapy, trachoma, tuberculosis, occupational diseases and accidents, maternal and infant welfare and social hygiene. Most of these courses are of a month's duration and include residence in the institution. A nominal fee of $1.00 is charged for admission. Courses of from one to three months duration are offered in the obstetric clinics and in the training schools

for midwives, the latter offering excellent material for postgraduate teaching.

The highest form of postgraduate instruction, however, is the system of assistants, associates and docents at the university clinics. This system resembles closely that of the German universities. After graduation and internship, the physician who elects a specialty spends from two to ten years in the university clinics thus obtaining a practical training which is unequalled either in the French, English or American institutions. He is not one man's assistant or associate, but he is a part of the medical school; he gives years of hard work to the school. On the other hand, the school takes care of him, enables him to make a living, and when leading positions open up in city hospitals or in smaller communities, he is assured of such a position.

In spite of the fact, that universities, that the Postgraduate Committee and that the Rural Health Service are subsidized by the Government, "politics," in our sense of the word, does not enter at all. The universities have a remarkable autonomy, which they have fought for ever since the seventeenth century and have frequently rejected nominations which the Department of Education has tried to impose on them.

There is no doubt, that the extension courses of some of our state universities could be improved conveniently. Particularly, the offering of residencies for the duration of courses seems a very fruitful scheme and has proved to be highly successful in Hungary.

Dental Education as Related to Medical Education

ALFRED OWRE, D.M.D., M.D.
Dean, School of Dental and Oral Surgery, Columbia University
New York City

It has long been recognized by thinking men in both medicine and dentistry that dentistry is essentially a specialty in medicine. Among leading thinkers who have so held are the late Dr. Eugene S. Talbot, of Chicago, for years chairman of the Section of Stomatology of the American Medical Association (discontinued after his death); Dr. Charles H. Mayo; Dr. W. S. Thayer; Dr. M. C. Winternitz; Dr. Abraham Flexner and Dr. A. LeRoy Johnson. Dr. Johnson wrote recently:[1]

We know that dental operations are being done without due regard to their relation to general somatic conditions; that many of them not only fail in purpose but actually initiate pathologic processes in other parts of the body. Abnormalities of the oral cavity are rarely recognized as possible evidence of systemic disorders or as secondary to lesions elsewhere. ***recognition of the relation of focal infections to systemic conditions came from the medical profession. Moreover, it is true that the men in dentistry who are making contributions to the knowledge of the biologic nature of the teeth and associated structures are receiving more encouragement from medicine and the biologic sciences than they are from the dental profession. The greater part of the scientific work that is being done is under the direction, at least, of men outside the dental profession.

We shall get on faster when we acknowledge things as they are. *** Great progress has been made in the development of (dental) technic, but knowledge of the biologic aspects of the conditions which make such activities necessary has lagged far behind. *** There has been practically no progress in the prevention of dental ills.

*** The prime reason why dental education does not do all that is expected of it is not a matter of money, organization or method, but of an illogical division of effort between the medical and dental curriculums.

On its present basis, dental education assumes a dual rôle. It tries to serve two masters with the usual result. It faces a situation in education that has not been given sufficient emphasis; the two-fold task of training technicians and developing scientists.

*** The man is the exception who is constituted for this dual rôle. *** Few surgeons are scientists. *** The dental student is the surgeon type. Dentistry is known as a mechanical art and draws to it men with a mechanical bent. In schools where individual members of the teaching staff are trying to interest classes in the biologic aspects of dentistry, the result is consistently disappointing. *** The large majority of the class *** attend the dental school to learn how to perform dental operations. *** This supposed antithesis of the scientific and the practical is the most pernicious misconception that could enter the mind of the student so far as his progress in medical science is concerned. The scientific and the practical are not antithetical. ***

I might discuss the independence of dental education. Something can be said for it; something can be said against it. Yet the general opinion is that as a system for training men for graduate work and research in the medical sci-

1. A. LeRoy Johnson: Stomatology: a Problem in Education. J.A.M.A., May 4, 1929.

ences, the independent character of dental education is a hindrance. This opinion prevails in spite of the fact that the editor of the Journal of the American Dental Association thinks otherwise.[2] Space will not permit me to discuss this editorial. It is sufficient to note that when it can be said editorially in the official organ of the American Dental Association that "medical men do not think in dental terms any more than dental men think in medical terms," no one with any appreciation of what science means will deny that there is somewhere a missing link in education. ***

But dental education is not alone at fault. On its present basis the medical curriculum has a vital defect. Although leading practitioners of medicine recognize the importance of the mouth in the study of disease, the medical school has a traditional aversion for the oral cavity. The course of study includes interpretive courses covering all parts of the human body except the mouth. *** Ignoring the mouth, the medical school encourages the now too prevalent practice of treating symptoms, and gives logical justification for the superficial type of specialization that runs rampant.

Though moderate in tone, this article is a severe arraignment of a system. I may say that in my thirty-odd years of experience it is entirely borne out. Dr. M. C. Winternitz remarked in 1929:

There are serious difficulties in the relationship between dentistry and medicine, from the standpoint of education, of economics, and of the social setting. I went to what was considered a fairly good medical school, but had I not known that man had teeth before I went there, I certainly never would have found it out in the medical school.

I believe that most medical schools still have that point of view. Of course, things have happened in the last decade and a half that have interested the medical man, in a general way, in the teeth, but he knows very little about them. The medical student is not taught the anatomy, the physiology, the bacteriology nor the pathology of the teeth, and when he gets into the clinic somebody may say, that here is pyorrhea or carious teeth, and perhaps, occasionally, in this enlightened period, a tooth may be extracted or something else may be done, but it is only as a secondary consideration. *** We have lived nearly a hundred years in the most perfect example of an absurd condition that could possibly be conceived of; namely, that Dentistry should be an entity, separated from Medicine.[3]

Dr. Mayo is quoted as stating at the last annual meeting of the American Medical Association, that 61 per cent of the cases in the Mayo Clinic come as a result of mouth infection.[4] Another telling illustration of the need for scientific oral specialists capable of diagnosis, instead of technicians merely, is afforded by cancer of the mouth. This is

"one of the most frequent forms of malignancy met with—of 811 cases of carcinoma at the Huntington Hospital in the last year, 169, or 20%, were of the mouth *** unfortunately, not only is cancer of the mouth the second most frequent but it is one of the most malignant. *** (It) is a rapidly growing and metastasizing lesion, which is curable today in only 20 to 25% of the cases at best *** the appreciation (by a dentist) of the possibility of malignancy and the giving of advice to seek immediate medical care will be in many cases of life-saving value."[5]

2. Endowments to Dentistry, Edit. J. Am. Dental Assoc., November, 1928.
3. Excerpts from a stenographic report of an address before the faculty of the School of Dental and Oral Surgery of Columbia University, Nov. 9, 1929. Clin. Med. and Surg., August, 1930.
4. Dental Survey, September, 1930. Quoted by Forrest E. Staples, D.D.S.
5. Address by William Lewis, M.D., Department of Pathology, Pondville Hospital and Huntington Memorial Hospital, before the Southeastern District Massachusetts Dental Society, March 19, 1930. Bull. Massachusetts State Dental Society, September, 1930.

Dr. Talbot stated in 1919:

> From time to time, in the past thirty years, I have repeatedly called the attention of the (dental) profession to the fact that modern dentistry is producing more disease than any other one cause.[6]

If a large per cent of disease in cases presented at a great clinic are caused by mouth infection; if, to mention only one specific disease, over one-fifth of the attacks by cancer, appear in the mouth; if, "modern dentistry is producing more disease than any other one cause," surely, as a great university president remarked to me recently, on this question, there is no argument. Not only is our present system of dealing with the oral region "unwarranted," as Dr. Johnson points out, but it is indefensible.

Over forty years ago, Dr. Talbot began his well-founded criticisms of dental practise. Twenty years ago, dentistry received an absolutely staggering challenge from Dr. William Hunter, of London—and, except for a few university schools, did nothing.[7] The same year Dr. Flexner stated:

> We have come to see in the last few years that dentistry is a branch of medicine of the same dignity and importance as pediatrics, obstetrics, gynecology, or any other specialty. *** The new school of medicine will, it is hoped, undertake to place training in dentistry on the same academic and scientific level as training in medicine and surgery.[8]

This is what Dr. Flexner thinks dentistry should be. What he thinks it is, however, he brings out in his recent book,[9] in which he classifies it with "business, extension, and summer courses" not, in his opinion, of university calibre.

Eighteen years ago Dr. Charles H. Mayo remarked:[10]

> The next great step in medical progress in the line of preventive dentistry should be made by the dentists. The question is will they do it?

By and large they have not done it. While most dental schools nowadays boast a "university affiliation," with too many of them it is merely nominal. The work is not of university grade. In one such school enrolling hundreds of students, no credit is given for any part of their course in the excellent medical school of the same university. The dean of this medical school wrote to me, "*** The schools are as separate and distinct as though they were thousands of miles apart." Students in another large "university" dental school receive only one year

6. Chairman's Address, Section on Stomatology, American Medical Association, June, 1919.
7. Address, "The Rôle of Sepsis and of Antisepsis in Medicine." Delivered at the opening of the Session of the Faculty of Medicine of McGill University, Montreal, Oct. 3, 1910, by William Hunter, M.D., Lancet, Jan. 14, 1911.
8. Quoted by Dr. Douglas Vander Hoof, Southern M. J., December, 1921, p. 1002.
9. A. Flexner: Universities: American, English, and German, Oxford University Press, 1930. Pp. 192 and 193.
10. C. H. Mayo: Constitutional Diseases Secondary to Local Infections, Dental Review, April, 1913.

of premedical credit after completing a six-year (preprofessional and professional) course in dentistry. In one university dental school, students transferring to medicine receive full credit for the two professional and two preclinical years; they need only two more years in the medical school for graduation.

Much of the science teaching in dental schools is a farce. It is often done in the dental school, notwithstanding the "university affiliation" which ought to entail high-grade science teaching in the regular science departments of the academic or the medical college. Yet, in 1916, Dr. John B. Murphy, of Chicago, asked:[11]

> Why should the dentist be educated in a different room from the surgeon in the essential elements—in his bacteriology, histology, biology, physiology and anatomy? He should not. It is an anomaly. The first two years, as indicated by Dr. Thornton, should be the same with the aurist, the oculist, the surgeon, the neurologist, the internal medical man, and the dentist, and until this educational error is corrected there will be no correlation and no cooperation between dentistry and internal medicine.

In some dental schools, four or more fundamental sciences are taught by the same man! Very recently I heard it solemnly maintained in a meeting by a professor from a large dental school that it was perfectly possible for one man to do this adequately. Dr. Talbot wrote in 1920, "There is hardly an instance in which a dental teacher is a graduate of a college or university."[12] Also:

> Dentistry is a part of the healing art or it is not. It depends upon the method of teaching. If it is to be a part of the healing art, it must be taught as medicine is taught and not make pretense by having chairs in the fundamental branches of medicine appear in the curriculum to confuse the student and the public![13]

In the address first quoted from, Dr. Talbot remarked on this question:

> I have held for many years that the dental school could not make a professional man out of the student by the present method of teaching, even if the course should be extended to six or eight years.[14]

A single experience of a real university dental school some years ago with organic chemistry is illuminating. When this was first required, there were about 40 per cent of failures. (Teachers did not know the dental from the other students.) Nearly all of these failed again on repeating the course; and less than half of them passed a later condition examination. This probably indicates why some schools, reluctant to lose students, established their own science departments! It also illustrates Dr. Johnson's point that dental students, in general, are more technical than scientific in interests and ability. These boys, moreover,

11. J. B. Murphy: Dental Review, Proc. Chicago Dental Society, Jan. 28, 1916.
12. E. S. Talbot: The Status of Dentistry in 1920. Oral Hygiene, April, 1920.
13. Ibid.
14. See Note 6.

were a picked lot from the standpoint of both technical ability and preparatory school grades.

There is frequent need for improvement, then, before all dental schools can make good even their present claims; preprofessional work should be brought up to genuine university grade, and affiliation with a bona fide university having a medical school should be required. This last requirement would automatically insure enforcement of the first. Can we look for progress from the dental schools? About twenty years ago Dr. Talbot had a word on this also:

> Excuses made by deans and teachers of commercial dental schools for not raising the standard, or improving the curriculum suggested to me the term "swan songs." These swan songs have been sung for many years. ***
>
> Strange as it may seem, when the discussion of improvement in the teaching of biology, pathology, hygiene or prophylaxis comes up, swan songs are sung instead of discussing improvement in teaching along these lines by adopting and putting into operation these subjects so necessary for the well being of the race. *** Their idea is to continue these commercial diploma mills, turn out half-baked, half-educated men for the money in it as long as possible.[15]

One can only regret that the swan has been "such an unconscionable time a-dying."

In 1910, Dr. Flexner, in his masterly report on medical education to the Carnegie Foundation, wrote a few lines that today are very applicable to dental education:[16]

> The practical problem remains. How is the existing situation to be handled? The higher standard is alike necessary and feasible. How long is it to be postponed because it threatens the existence of this school or of that?

More recent utterances through official dental channels leave no doubt that changes will be opposed by the organized profession. There has been a violent defense reaction, with sentimental exhortations to rally to the standard, to uphold "our birthright.[17] In 1928, it was remarked by the president of the American College of Dentists, Dr. Henry L. Banzhaf, in his presidential address:

> ***members of the profession who have at heart the best interests of the public which is being served by the dental profession combat the propaganda that seeks to relegate dentists and dentistry to a lower sphere of activity, and establish a new profession called "stomatology" as a specialty in the practice of conventional medicine.

It was specifically recommended that:[18]

> A standing committee should be appointed whose business it would be to take appropriate action on any legislation that may be brought before the House of Delegates having to do directly or indirectly with dental education or dental research. This Committee, which might properly be called the Committee on Education, Research and Relations,* should be given power to support or oppose

15. E. S. Talbot: The Latest Swan Songs, Dental Summary, July, 1911.
16. Medical Education in the United States and Canada, Bull. No. 4, Carnegie Foundation for the Advancement of Teaching, p. 49.
17. Edit. Shall We Abandon Our Birthright?, J. Am. Dental Assoc., October, 1930.
18. *This committee was appointed in November, 1928, and has been busily at work on the lines suggested.

the various matters that might come before the House of Delegates. It should be charged with the duty of studying the possibility or the desirability of the establishment of a working relationship between the College and such groups as the American Association of Dental Schools, the International Association for Dental Research, the Research Commission of the American Dental Association, the Dental Educational Council of America, the National Association of Dental Examiners, and the American Medical Association.

Another standing committee, which might be called the Committee on Legislation, consisting of Fellows living in or as near as possible to Washington, our national capitol, should be established to aid the Committee on Legislation of the American Dental Association whenever questions arise in any department of the government relating to dental education or research.[19]

Another activity proposed was the securing of endowment for dental education, on the grounds of the "astonishing return to the public in terms of better health service."

Most of such agitation is in the name of the public good. It is instructive to recall, in this connection, a statement by the late Professor William Graham Sumner of Yale:

Interests dominate modern politics, but always more or less secretly, because it is not admitted in the mores to be right that they should dominate. Hence another pretext must be put forward to cover the interest. The best pretext is always an abstruse doctrine in the theory of the public welfare. When the New York courts held a law to be valid which forbade a saloon to be licensed within two hundred feet of a schoolhouse, the saloon keepers attacked the schools as a nuisance detrimental to property.[20]

And later,

Parties formed on interests invent dogmas which will serve as major premises for the special inferences which will suit their purposes.[21]

The interests, in the case of organized dentistry and dental education (they travel hand in hand) are fairly obvious. The unqualified dentist fears a possible loss of income and of personal prestige, unless he remedies somewhat the deficiencies of his education. The profit-making dental school, as I have stated, faces, at the least, a big falling-off in its ill-gotten gains.

Help must come from the better universities, and, as Dr. Johnson points out, through their medical schools. Most leaders in medical thought are in agreement on the need for change.

A statement by Dr. Thayer some years ago expresses, I am certain, the majority opinion among leading medical educators:

The close association of dentistry with medicine and surgery is a matter which I have very much at heart. I think it is most unfortunate that the instruction of the dentist is in any way different from that of the doctor and surgeon. Dentistry should be just as much a specialty of surgery and medicine as ophthalmology, otology, rhinology, or any of the other well-recognized specialties.

19. President's Address: American College of Dentists, delivered at Minneapolis, August, 1928.
20. W. G. Sumner: In War and Other Essays. Yale University Press, 1911, p. 154.
21. Ibid, p. 161.

Dr. Hunter pointed out in his Montreal speech the atrocity of many dental practices, and implied very clearly the needed corrective.

***The patient is quite willing to describe and discuss with the doctor all his other troubles and complaints, to which, as he says, he is a "martyr"—his indigestion, headaches, liver trouble, his rheumatism, his gout, and his "neuritis." But the subject of his teeth is his own affair—one between himself and his dentist. And the doctor regards it as such. "It is a matter of teeth and dentistry," with which he cannot deal. *** My clinical experience satisfies me that if oral sepsis (and nasopharyngeal) could be successfully excluded, the other channels by which "medical sepsis" gains entrance into the body might almost be ignored. *** The worst cases of anaemia, gastritis, colitis of all kinds and degrees, of obscure fever of unknown origin, of purpura, of nervous disturbances of all kinds ranging from mental depression up to actual lesions of the cord, of chronic rheumatic affections, of kidney disease are those which owe their origin to, or are gravely complicated by, the oral sepsis produced in private patients by these gold traps of sepsis. Time and again I have traced the very first onset of the whole trouble of which they complained to a period within a month or two of their insertion. The sepsis hereby produced is particularly severe and hurtful in its effects. For it is dammed up in the bone and in the periosteum, and cannot be got rid of by any antiseptic measures which the patient or the doctor can carry out. Moreover, it is painless, and its septic effects therefore go on steadily accumulating in intensity without drawing attention to their seat of origin.[22]

This is pretty strong speaking. The argument was later both reinforced and extended by Manfred Call, dean of the Medical College of Virginia.

At this time attention may be focused not on the teeth as such, but on the mouth and all of its structures, mucous membrane, submucosa, the osseous tissue of the maxillae, the mandible, the teeth and the alveolar structure, the blood and lymph supply, the innervation, the functional ability of the mouth structures and jaw musculature, together with a consideration of developmental anomalies, acquired defects, the effect of traumata and bad habits and the modification in function that accompanies retrogressive tissue changes in the body, however induced, and systemic states as reflected in the mouth.

This enumeration opens a field of far greater dimensions than that of oral sepsis. For the whole, obviously, is greater than any of its parts, no matter how important a fraction may be as compared to the whole. Oral sepsis is concerned with the principles of infection and immunity, with predisposing and active agents, with local and general tissue resistance. This larger field, in addition, is concerned with the findings of embryology, and the application of the principles and teachings of physiology and biochemistry. It emphasizes the interrelation of organ function to organ function as part of a general whole. It calls for as liberal a fundamental training on the part of the dentist as is now given to the medical man.[23]

I believe these two speakers, alone, demonstrate the absolute necessity for the readoption of the oral region by medicine and surgery and its establishment among the other specialties. The only question is how it can best be brought about. In the present state of medical and dental education, it would be folly to speak ex cathedra on the question —to advance any one plan as perfect or final. Like all educational

22. See Note 7.

23. Manfred Call: Correlation of Dentistry and the Practice of Medicine, read before the Virginia State Dental Association, October, 1922. Virginia Dental Monthly, June, 1923.

questions of any moment, it will be a matter of evolution, requiring years for its proper development.

As Chancellor Capen of the University of Buffalo wrote for the first issue of this JOURNAL,[24] "Nothing is ever final in education." Professor Sumner, in the book already cited,[20] made the following general statement:

> ***the future tendency can never be discussed beyond the immediate future without running into predictions which would always be vague and in a high degree uncertain. (p. 149).

One thing, however, may well be universally exacted in any scheme of education for the specialist in the mouth region. He should be admitted like any other medical student, and should take the same premedical and preclinical work. On this point I believe there can be no argument, save that of vested interest.

In the preclinical years, students should acquire the knowledge of the general field of medicine, including the specialties, necessary to an intelligent later practice. The oral region, now neglected, should also be included here, as a possible field for later specialization. Students very often do not as yet know in what they may wish to specialize. For the man, however, who has decided, special various electives should be provided in the preclinical years. Oral anatomy and oral pathology, for instance, should be offered here. (The former should be taught by a specially trained teacher in the department of general anatomy; the latter is similarly taught in the department of pathology). Obviously, an oral specialist will not need all the specific training of the general medical man. A detailed knowledge of obstetrics and of various other specialties might well be omitted from his curriculum. A general cultural knowledge of these would suffice for an intelligent practice in the oral region. Quite as obviously, the oral specialist will benefit by some special training of his own at whatever points it can be logically worked in.

In planning the balance of a course, it is futile to speak, except in the light of accepted principles, and of what practical experience has shown will probably prove sound. The principles have already been laid down. The most urgent practical need, as I see it, is to evolve a plan for training specialists capable of scientific diagnosis, and of prescribing and supervising proper restorative measures. Considerable reorganization will be needed. The oral field, as has been pointed out, is more exacting than almost any other. Furthermore, it is very illogically defined. Orthodontia, for example, has properly no place in dentistry as now practiced. It is clearly a branch of orthopedic surgery, and should be studied as

24. S. P. Capen: Premedical Education, Bull. Assoc. Am. Med. Colls., July, 1926.

such. To require for this specialty within a surgical specialty training, say, in filling teeth and making plates, is wholly illogical, as well as wasteful. Oral surgery, clearly, is a branch of general surgery, with the same requirements as to the type and the training of students.

The oral region not only makes the heaviest diagnostic demands, but it also requires an understanding of, and a certain ability to perform, very delicate digital operations. The specialist must thoroughly understand the science and art of such procedures as they are related to the functions of the teeth, jaws and associated parts.

Since the qualities of a Huxley and a Benvenuto Cellini are seldom met with in the same man, at first the number of candidates will not overcrowd the departments. As the specialty grows in dignity and usefulness, however, it will increasingly attract this valuable type of student. Nor, for the specialist, would this be a "trade course." It requires a knowledge of physiological function, of physics, of metallurgy, and of various other sciences, that lend it dignity and university standing. The existent flux in medical education is an additional reason for not being too dogmatic. It will make the inclusion of an important new specialty easier, perhaps; but until it is somewhat resolved, hard and fast requirements are doubly futile beyond a certain point. It cannot be too strongly emphasized, however, that the oral specialist must have the same fundamental scientific training, the same scientific method, and the same point of view as any other medical man.

When one considers the ground now covered by the term dentistry, the difficulties of outlining any but an experimental course become apparent. Dentistry as now practiced includes oral diagnosis; oral surgery; orthodontia; operative dentistry (chiefly filling teeth); prosthesis (plates and other restorations); crown and bridge work (a combination of the above two); and periodontia. One man, under the present plan is expected to know and practice all these branches. Is it possible?

Of course, in a well-organized practice the major portion of restorative work should be performed by well-trained assistants. Even as dentistry is now practiced, a great deal of the mechanical work is sent to laboratories. Part of it is very badly done; part is exceedingly well done. Some dental mechanics are good workmen. This fact, coupled with the inferior technical ability of many dental graduates, has given rise in some places to an anomalous situation.

Dentists in certain districts had seen their field encroached on more and more by able technicians, who naturally tended to enlarge the field of their own activities. Legislation was sought and often secured pro-

hibiting all but licensed dentists from working in the mouth, in order to leave a little something the dentist could collect for. A surgeon is under no such handicap; he may employ as many helpers, of as many kinds as he needs, without restriction as to where they may do their work.

Under a reorganized plan of dental practice, it would be necessary, wherever such legislation is effective, to secure modification of the law. Intra-oral work should be permitted to several types of specifically trained assistants, under the responsible supervision of the specialist. If the training of such helpers, as well as of the specialist, were a recognized function of reputable universities, it would be a simple matter to secure legislation permitting intra-oral work by designated technicians, and safeguarding such practice against exploitation.

Once we have confidence in the education and ability of all operators, it is poor economy to insist that only the specialist's hands may work in the oral cavity. To the extent that the master-type can employ a variety of helpers, to that extent can he increase his usefulness.

Dental hygienists, of course, are already taught in some universities. I believe their training, for example, could well include much of children's dentistry, and without exceeding a calendar year. A large part of children's dentistry consists in filling simple pits and fissures. Women can often do this better than men. A variety of other special tasks could equally well be taught in short courses.

I recently pointed out, in my report to the President of Columbia University, the saving in educational costs of a reorganized group practice, estimates on the basis of a community study by the Committee on the Costs of Medical Care. It amounts to at least $230,000 on a group of one specialist and twelve assistants.[25] Operating costs would be much less than for thirteen separate offices. Fair wages to assistants should amount to less than the incomes—certainly than the desired and expected incomes—of as many dentists. More important, such a group would serve a much larger number of persons, at a lower cost per person. Most important, all patients would receive care that is both skilled and scientific.

Insofar as the law permits, some of the most successful dental practices are already organized on a similar plan. I know one excellent dentist who, with a young woman assistant trained by himself, a technician similarly trained, and an excellent laboratory next door, always

25. Dean's Report: School of Dental and Oral Surgery of Columbia University, for the period ending June 30, 1930.

has three or more patients under treatment at the same hour. He turns out several times the average amount of work done by other good denists working alone, and of absolutely first quality. He also manages to keep an eye on the practice of two junior associates, and to help out in the more difficult operations.

It is agreed by a number of experts who have thought this out that without legal restrictions and with an available body of skilled assistants, this system could be extended widely, to the great advantage of the public. In my judgment the necessary first step is a joint consideration of the problem by both medical and dental departments of the leading universities.

Council on Medical Education and Hospitals American Medical Association

At the annual meeting of the American Medical Association held in June, a number of items were referred to the Council for future consideration.

The Reference Committee agreed with the report of the Council that the school should own or control a general hospital with a daily average of not less than 200 patients who can be utilized for clinical teaching, and should control other facilities that would provide ample means for instruction in contagious, nervous and mental and children's diseases.

Nervous and Mental Diseases

1. Medical students and physicians need more adequate training in psychiatry.

2. There should be interns in every hospital for the care of the insane. The presence of the inquiring student would do more to advance pathology, increase the number of autopsies and develop research in our hospitals for mental diseases than any other factor.

3. More of the research energy of the medical profession should be diverted into the difficult fields of psychology and psychiatry.

4. Education of the people so that they will view mental diseases as they do other diseases is important.

5. The handling and care of the mentally ill should be dealt with along medical rather than along legal lines.

Medical Aptitude Tests for 1931-1932
Preliminary Report

F. A. Moss

George Washington University
Secretary Committee on Aptitude Test

At the Denver meeting of the Association last October a report[1] was given of the experimental work covering a period of two years, on the use of Medical Aptitude Tests in predicting success in medical school and in selecting students for admission to medical schools. Following the report, the following resolutions were adopted by the Association:

1. That the Association record its sense of the importance of the study and of the value of aptitude tests in relation to the selection of students for medical schools.
2. That the Association recommend the use of aptitude tests as one additional criterion for selecting medical students.
3. That next year the tests be given the same day in all the premedical schools in the United States and a distribution showing the standing of all the applicants together with the names and scores of the individuals applying to each school be sent to the dean of the medical school concerned.
4. That $1.00 be charged each applicant to cover the expenses of this service of the Committee.

The following committee was appointed to conduct this work: Torald Sollmann, Western Reserve University, Chairman; H. G. Weiskotten, Syracuse University; Edward Koch, University of Buffalo; Beverly Douglas, Vanderbilt University; and F. A. Moss, George Washington University, secretary and Director of Study. Steps were immediately taken to organize the work for giving the aptitude test to all students applying for entrance to medical schools this year.

Construction of New Test

Two forms of the aptitude test had previously been developed for use in the experimental work. In order that no applicant should have an unfair advantage over others because of having seen one of the previous forms, it was necessary, first, to construct an entirely new form of the test for use in this year's testing.

1. J. Assoc. Am. M. Colls., 5:1 (Jan.) 1931.

Immediately following the Denver meeting, work was begun on the construction and standardization of the new test. The various items of the two previous forms of the test were studied in detail with a view to determining which items gave the best indication of success in the medical school. New items were constructed along these same lines and were tried out with a group of known ability. The most of this preliminary work was done by Thelma Hunt, Donald Stubbs and Leon Gordon under the direct supervision of the secretary of the committee.

On the basis of the preliminary work a draft of the new test was made and sent to the various members of the committee for criticism and suggestions. In the light of their suggestions, the final draft of the test was made. The test consists of six parts: (1) scientific vocabulary; (2) visual memory for anatomical drawings; (3) memory for descriptive material; (4) premedical information; (5) learning and retention of material, and (6) understanding of difficult printed material. The total working time required for taking the test is one and a half hours.

Cooperation

Excellent cooperation in carrying out the testing has been given by medical schools and premedical schools. All the medical schools cooperated in the preparation of a list of schools and colleges training premedical students; many of the medical schools aided directly in securing cooperation in the premedical schools from which their applicants come.

The premedical schools cooperated in administration of the test to their applicants, and in forwarding the papers to the committee for scoring. The total number of premedical schools in which tests were given in February is 547. This number includes premedical schools in every state of the United States, three in Canada, one in the Philippine Islands, one in Porto Rico, and one in Hawaii. In addition, a number of premedical schools that had no students applying for admission this year indicated their willingness to cooperate in years when they have applicants to the medical schools. In the schools the tests were given by a designated member of the staff, usually a member of the teaching staff of a department in close touch with the premedical work of the college.

Many helpful suggestions for carrying on and improving the work have been received from both the medical schools and the premedical schools.

Giving and Scoring of Tests

The tests were given on February 13 at the same hour in all the schools throughout the country. After being given, all the tests were forwarded to the office of the committee for scoring and tabulation. As

soon as the tests arrived a corps of examiners and statisticians began scoring of tests and tabulation of results. The first report was sent to the deans or admission officers of the medical schools March 15.

Making the Results Available

Results on the tests were supplied to the medical schools in two ways.

First, a list of all the students taking the test was sent to each medical school. This list gave for each student his total score on the test, and his percentile rating, or relative standing in the whole group tested. This list was arranged by states and by premedical schools within the state.

Second, a more detailed record was sent to each medical school for those students who had indicated that they are applying or would apply for admission to a particular medical school. This record gave for each student a detailed analysis of his test, giving separate scores on the six parts of the test.

All the premedical schools cooperating have received a report on their own students, giving each student's total score and percentile rating. No results have been returned to the applicants themselves, and the premedical schools have been asked to regard the reports as strictly confidential information.

TABLE 1. DISTRIBUTION OF NUMBER TAKING TEST BY STATES

State	Number	State	Number
Alabama	168	Nebraska	184
Arizona	8	Nevada	10
Arkansas	63	New Hampshire	100
California	390	New Jersey	58
Colorado	61	New Mexico	17
Connecticut	105	New York	1450
Delaware	5	North Carolina	225
District of Columbia	245	North Dakota	33
Florida	48	Ohio	658
Georgia	133	Oklahoma	111
Idaho	11	Oregon	100
Illinois	400	Pennsylvania	1097
Indiana	265	Rhode Island	47
Iowa	219	South Carolina	73
Kansas	135	South Dakota	42
Kentucky	143	Tennessee	118
Louisiana	150	Texas	339
Maine	26	Utah	65
Maryland	125	Vermont	43
Massachusetts	301	Virginia	225
Michigan	308	Washington	90
Minnesota	185	West Virginia	154
Mississippi	52	Wisconsin	132
Missouri	247	Wyoming	6
Montana	27	Foreign	23

Summary of Results

A total of 9,220 students applying for admission to the medical schools took the test. Table 1 shows the distribution of this number by states. The test scores for these students ranged from 15 to 240. The total distribution is shown in Figure 1. The median score of the group is 134, the upper half making scores of 134 or above, the lower half below 134. The Upper Quartile Point is 164, the highest fourth making 164 or above. The Lower Quartile Point is 105, the lowest fourth falling below this score.

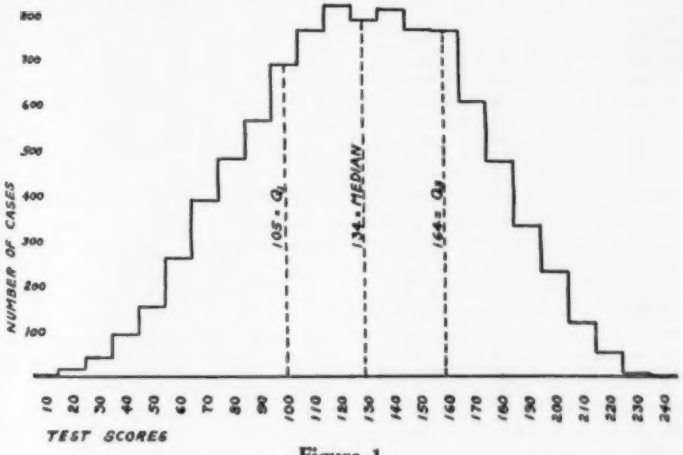


Figure 1

Table 2 gives the percentile ratings based upon the total distribution. The percentile rating indicates where the student falls in relation to the whole group taking the test. For example, if a student's score is 104, his percentile rating is 24. This means that he falls 24 per cent of the way to the top of the group; he makes as high or higher than 24 per cent of those taking the test, and 76 per cent are above him. Or, if a student has a score of 204, his percentile rating is 96. He makes a rating as high as or higher than 96 per cent of those taking the test, only 4 per cent are above him. These percentile ratings have been used in reporting the scores in order to give an indication of the relative ability of the applicants.

The exact use that will be made of the test results and the exact standards to be required on the test will vary according to the local conditions in the medical schools. Most of the medical schools will give equal weight to three criteria in admitting students, as follows: (1) Ap-

titude test rating; (2) scholarship as indicated by grades in premedical work, and (3) personal interview ratings, letters of recommendation, and other indications of personal fitness.

TABLE 2. PERCENTILE RATINGS ON APTITUDE TEST

Scores	Percentile Rating
240	100
215-239	99
210-214	98
205-209	97
200-204	96
198-199	95
196-197	94
193-195	93
191-192	92
187-190	91
185-186	90
183-184	89
181-182	88
179-180	87
178	86
176-177	85
175	84
173-174	83
172	82
170-171	81
169	80
168	79
167	78
166	77
165	76
164	75
162-163	74
161	73
160	72
159	71
158	70
156-157	69
155	68
154	67
153	66
152	65
150-151	64
149	63
148	62
147	61
146	60
144-145	59
143	58
142	57
141	56
140	55
138-139	54
137	53
136	52
135	51
134	50
133	49
132	48
131	47
130	46
129	45
127-128	44
126	43
125	42
124	41
123	40
121-122	39
120	38
119	37
118	36
117	35
115-116	34
114	33
113	32
112	31
111	30
109-110	29
108	28
107	27
106	26
105	25
103-104	24
102	23
101	22
99-100	21
98	20
96-97	19
94-95	18
92-93	17
90-91	16
88-89	15
86-87	14
84-85	13
82-83	12
80-81	11
78-79	10
76-77	9
74-75	8
72-73	7
69-71	6
67-68	5
65-66	4
55-64	3
45-54	2
35-44	1
Below 35	0

JOURNAL
OF THE
Association of American Medical Colleges

Volume 6 SEPTEMBER, 1931 Number 5

DR. FRED C. ZAPFFE, Editor, 25 East Washington Street, Chicago

Cost of Medical Education

An investigation of the cost of medical education to the student was begun by the American Medical Association through its Bureau of Health and Public Instruction sometime in 1921. A report of the results of this study is made by Dr. R. G. Leland, associate director of the Bureau, who conducted it. (J.A.M.A., Feb. 28, 1931).

Information for this study was drawn from every geographic subdivision of the United States, medical schools located in the small cities and large metropolitan areas, state and non-state universities, old schools and new schools, and schools for both white and Negro students. The expense data cover only the four years of medical work. Premedical, intern, graduate and postgraduate years were not included.

Forty medical schools agreed to cooperate in this work. Altogether, 7,200 expense books were sent to these forty schools having an enrolment for 1929 of 10,947 students. The total number of expense books which were found complete and which showed a degree of accuracy necessary for inclusion in this study was 1,253. The figures given in the eight tables accompanying this report are based on the returns made by 1,161 students because 19 of the whole number were married and 73 were living at home.

The averages drawn per year from these 1,161 expense accounts are as follows: Tuition and fees, $298.60; medical books, instruments, etc., $105.68; board and room, $388.54; clothing and laundry, $137.30; travel, $70.99; insurance and interest, $77.45; recreation, $76.63; miscellaneous, $62.22. The average earnings per year were $283.48. The investigation made by Dr. Leland reveals the actual sum spent by the student in any years as $1,100, this including tuition and fees, books and periodicals, board and room, clothing and laundry, and recreation. In 1920, by contrast, the amount was almost $900. The figures submitted do not take into account the interest on the investment or the amount of money the young man might have earned were he in a gainful occupation rather than in a professional school. At the lowest possible estimate, apparently, a medical education must cost at least $5,000, and, if all the factors are taken into account, may cost in actual cash expended as much as $10,000. If possible earnings and interest are added, the cost may actually reach $20,000. In fact, Dr. Lytle, in a paper read before this Association in 1926, stated that every medical graduate represented an actual investment of $25,000.

Pediatric Education

The Subcommittee on Medical Education of the Committee on Medical Care for Children of the White House Conference on Child Health and Protection Section on Medical Service has published its report in pamphlet form. The chairman of this committee was Dr. Borden S. Veeder, of St. Louis.

The report consists of two parts: Part I, containing a presentation of the results of statistical studies on pediatrics in its relation to the physician, undergraduate and postgraduate instruction,

and an outline of a pediatric course. Part II is devoted to a discussion of the subjects presented in Part I, certain recommendations of the committee and an appendix in which are listed the six questionnaires sent out by the committee to various sources of information.

The report contains much valuable information and covers its field admirably. Space alone forbids an extended review or discussion; however, the recommendations of the committee are presented in full.

RECOMMENDATIONS

1. Pediatrics is a fundamental basic clinical subject and should be recognized as such by medical schools. The department of pediatrics should be independent and of equal academic rank with other departments such as medicine.

2. Adequate teaching staff, hospital and clinic facilities, and laboratories should be provided and adequately financed.

3. The minimum teaching facilities should be: (1) Fifty beds for infants and children under the control of the head of the department. (2) Ten bassinets for newly born infants in a maternity hospital or division under the control of the pediatric department. (3) An outpatient clinic with a ratio of at least 10 new pediatric admissions yearly for each student in the senior class. (4) A well-baby clinic for teaching normal feeding, growth and development. (5) Affiliation with a hospital for "contagious" diseases. (6) Laboratories for routine and research work.

4. Pediatrics should be taught from its broad viewpoint. Particular stress should be laid upon growth and development at all ages, preventive measures, both general and specific, as well as disease in childhood, in order that the physician may be adequately fitted to meet the demands of the modern practice of medicine.

The course of undergraduate instruction should cover the following points: (1) The physical and mental growth and development of the infant and child and factors influencing same. (2) The nutritional requirements of infancy and childhood including the feeding of normal infants and children. (3) The nutritional diseases of infancy and childhood and their treatment and prevention. (4) The "contagious" diseases: their recognition, prevention and treatment. (5) Diseases and pathological conditions peculiar to early life. (6) The peculiar manifestations of certain diseases in infancy and childhood. (7) Environmental and hygienic factors which are important in early life. (8) Social aspects of pediatrics. (9) Certain special procedures. (10) The importance of specific preventive measures. (11) Certain conditions the immediate recognition of which is essential to saving life.

5. Two hundred hours should be the minimum time assigned to pediatrics in the four year course. This will afford time for ward and clinic work in addition to standardized courses covering the subject. Electives in addition may be offered.

6. The teaching of pediatrics from a pedagogic standpoint should be carefully studied.

7. Intensive review courses (preferably of four weeks) should be continued for postgraduate students and attendance encouraged.

8. The extension courses at present given in some states should be continued, and started in states where they have not been introduced.

Doctors as Nursing School Teachers

More than 16,500 physicians lecture to student nurses or act as instructors in the schools of nursing, according to the records of 1,379 such schools. Numerically, they form one of the largest groups to come into contact with student nurses as teachers.

The largest groups of schools have from six to fifteen physicians on the teaching staffs; 82 schools have eight;

81 schools have ten; 84 schools have thirteen; 81 schools have fifteen. The range is from one to fifty physicians per school.

In a small proportion only of the schools, however, is the bulk of the teaching in the hands of the physicians. In one school, for example, a doctor is paid a substantial sum to devote his mornings to teaching the student nurses, and he lectures on fourteen different subjects. In some others the doctors may give many of the basic science courses, as well as lectures in their own specialties.

The accepted practice in the majority of schools is for the physician to give lectures on different types of cases. A nurse faculty member is usually present. After each lecture, she follows up the work with class discussion, and teaching on the nursing techniques involved. Sometimes three or four doctors will give the lectures on one subject during the term, sometimes one gives the entire series.

In spite of the fact that so many physicians are teachers in the nursing schools today, the staff physician who "knows the students by name" is far rarer than he used to be, it is said. Some physicians take a keen personal interest in the training school and in their lectures to the students. Others regard them as routine affairs. The fact that physicians no longer follow class lectures with bedside instruction, in many cases, but allow the formal lecture to suffice, is seen as one serious flaw in the present system.

The best type of physician instruction is seen to include:

1. Lectures planned from the point of view of the student nurse; including the nature of the disease; the nurse's role in the commonest methods of treatment; the special symptoms to watch for and report; what the nurse can do to make the patient comfortable.

2. Follow-up of lectures by bedside clinics for the students. This is a practice that has been neglected of late years, it is reported.

3. Encouragement of students in asking questions.

It is believed that such a plan of instruction would help in changing the modern tendency of lack of real contact between the physician and the student nurse. Both doctors and nurses believe the lack of close contact is a serious loss in the training of a nurse, and one reason why nurses sometimes do not know what physicians expect of them in the care of different types of cases.

About three per cent, or 522, of the physicians who teach are paid for their services. In most cases payment is small. Three or five dollars for a lecture is the most common rate. In a Maryland school, for example, two of the 21 physicians listed as instructors received pay, $50 and $40, for the term. In some cases the fee is considerable. One Boston physician receives $2,000 a year for his lectures.

The Committee on the Grading of Nursing Schools in general recommends the policy of payment for all teaching. It is believed it is sounder practice for the schools to pay for lectures than to receive them as gifts. It warns the schools, however, against allowing lecture posts to go to the younger and more needy, but less qualified, members of the medical staff, and advises them to select lecturers on teaching ability alone.

American Students in British Medical Schools

For a number of years past, since the physical limitations of American medical schools have made it necessary to limit the size of classes, especially of the Freshman class, American students have been applying in increasing numbers for admission to British medical schools.

These numbers have been stated variously, and, it has been pointed out that the applicants were not, as a rule, of the

caliber that would gain them admission to American schools; in fact, some of them had been denied admission repeatedly at times.

Since February, 1931, the General Medical Council of Registration in Medicine of Great Britain has made a special effort to determine whether students applying to British schools would be acceptable in this country. All such applications have been forwarded to this country for evaluation before any action is taken on them. Therefore, it is likely that hereafter only such students will be accepted as will reflect credit on American institutions of learning.

Information has been received with regard to the admission of American applicants to the Faculty of Medicine of the University of Edinburgh. The figures—and they are authentic—were as follows:

Inquiries received for 1929	240
Inquiries received for 1930	600
Inquiries received for 1931	602
Definite applications received in 1929	115
Definite applications received in 1930	235
Definite applications received in 1931	228
Applications accepted in 1929	12
Applications accepted in 1930	12
Actually admitted in 1927	31
Actually admitted in 1928	17
Actually admitted in 1929	8
Actually admitted in 1930	5

The School of Medicine of the Royal Colleges of Edinburgh received about thirty applications monthly from American students last year. Twenty-five American students were admitted to the first year class for the year, 1930-1931.

Further research is now in progress to determine what became of all those who were not admitted to these two schools, and what were the data on these points in the experience of the other medical schools in Great Britain.

American Medical College Association

June 2 and 3, 1876, a meeting was held in Jefferson Medical College, Philadelphia, in pursuance to a call issued by Dr. J. B. Biddle, Jefferson Medical College; Wm. H. Mussey, Miami Medical College; John T. Hodgen, St. Louis Medical College; J. Adams Allen, Rush Medical College; W. T. Briggs, Medical Department University of Louisville, and J. M. Bodine, Medical Department University of Nashville.

Twenty-two medical schools were represented by delegates.

J. B. Biddle, Jefferson Medical College, was elected president of the convention and Leartus Connor, Detroit Medical College, was elected secretary.

After considerable discussion, a committee was appointed to draft a constitution, by-laws and articles of confederation for an association of medical schools. The name "Provisional Association of American Medical Colleges" was adopted, and it was voted to hold the next meeting in Chicago, in June, 1877.

At the second meeting, held in the Palmer House, Chicago, June 2 and 4, 1877, twenty-five medical schools were represented.

The constitution and by-laws reported by the committee were adopted. The name adopted for the new association was "American Medical College Association."

The provisional association then adjourned to meet June 4, 1877 (the dates June 2 and 4 falling on Saturday and Monday), when it adjourned *sine die* and the American Medical College Association was duly organized under the constitution, by-laws and articles of confederation adopted at the last meeting of the Provisional Association. These articles of association were signed by the following twenty-three colleges:

Jefferson Medical College—J. B. Biddle.
College of Physicians and Surgeons, Med-

ical Department of Columbia College, New York—Edward Curtis.

Medical Department University of Louisville—J. M. Bodine and L. P. Yandell, Jr.

Louisville College of Medicine—Wm. Bailey and Dudley S. Reynolds.

Chicago Medical College—N. S. Davis.

Medical Department of Iowa State University—W. F. Peck and Elmer E. Clapp.

Medical Department University of Wooster—W. J. Scott and H. J. Herrick.

Cleveland Medical College, Medical Department of Western Reserve College—Isaac N. Himes.

Detroit Medical College—E. W. Jenks, Theo. A. McGraw and Leartus Connor.

Starling Medical College—Starling Loving.

Medical Department University of Vermont—A. T. Woodward.

Medical Department of Nashville and Vanderbilt Universities—T. A. Atchison and J. H. Callender.

Missouri Medical College—P. Gervais Robinson.

Dartmouth Medical College—E. S. Dunster.

Kansas City College of Physicians and Surgeons—T. B. Lester.

Miami Medical College—John A. Murphy.

Louisville Medical College—C. W. Kelly and E. S. Gaillard.

Department of Medicine and Surgery of the University of Michigan—Donald McLean.

Medical Department of the University of Louisiana—T. G. Richardson.

Rush Medical College—Moses Gunn.

Indiana Medical College—John A. Comingor.

Medical College of Fort Wayne—H. A. Clark.

Woman's Hospital Medical College of Chicago—Chas. W. Earle.

Dr. J. B. Biddle was elected president; Dr. N. S. Davis, vice-president, and Dr. Leartus Connor, secretary and treasurer.

The second annual meeting of the newly-created association was held in Buffalo, June 3, 1878.

In the meantime, the Bellevue Hospital Medical College and the Cleveland Medical College had come into membership. Of the twenty-five colleges now in membership in the Association, only sixteen were represented at this meeting.

George E. Frothingham represented the University of Michigan School and H. K. Cushing represented the Cleveland College; Austin Flint, Jr., represented Bellevue; S. D. Gross represented Jefferson. Dr. Davis and Dr. Gross were most active and acted as a committee whenever any committee work was called for.

The officers were re-elected.

The third annual meeting was held in Atlanta, Ga., May 3 and 5, 1879.

S. D. Gross, Jefferson Medical College, was elected president; N. S. Davis, vice-president, and Leartus Connor, secretary.

The fourth annual meeting was held in New York City, May 31, 1880.

Thirty-one colleges were now in membership and twenty-five of these were represented at the meeting.

At this meeting the three years course in medicine was adopted, twenty of the twenty-five colleges represented voting for it.

The officers were re-elected.

The fifth annual meeting was held in Richmond, Va., May 2 and 4, 1881. J. M. Bodine was elected president; W. T. Briggs, vice-president, and Leartus Connor, secretary-treasurer.

The sixth and last meeting was held in Cincinnati, May 16, 1882. Available records are not complete, hence it cannot be stated why the Association disbanded at this time. Search is being made to secure this information.

College News

Georgetown University School of Medicine

A bequest of $10,000 for a student loan fund was received by the will of the late George M. Kober for many years dean of the school.

New York University

Gifts and bequests amounting to $258,793 have been received. Many gifts for medical research are included. Following is the list: Altman Foundation, for research in pneumonia, under the direction of Drs. William H. Park, Jesse G. M. Bullowa and Milton B. Rosenbluth, $4,450; Mrs. Huguette Clark, for the current expenses of the department of dermatology, $3,000; International Committee for the Study of Infantile Paralysis, for study of infantile paralysis in cooperation with the committee, $2,500; The Hartley Corporation, for the department of therapeutics for 1931-1932, $2,500; Josiah Macy, Jr., Foundation for the Neurological Research Laboratory Fund for Migraine, $2,500; Mrs. Frances Neilson, through Dr. Charles Hendee Smith, for the department of pediatrics for x-ray work, $1,800; sundry donors, through Dr. Smith, for the current expenses of the department of pediatrics, $1,725; White Laboratories, Inc., for a fellowship for clinical work in connection with the use of liver extract in pernicious anemia, $1,250; sundry donors, through Dr. William J. Pulley, toward the expenses of the children's clinic, $1,064.30; sundry donors, through Dr. William J. Pulley, toward the expenses of the children's clinic, $1,064.30; sundry donors, many through Mrs. Frances E. Storer, for the cardiac clinic fund, $1,045; Lederle Laboratories, Inc., for experimental work on liver extract under the direction of Dr. John H. Wyckoff, Jr., $1,037.50; National Tuberculosis Association, for a scholarship for the study of health conditions in Harlem, School of Education, $750.

Johns Hopkins University Medical School

Faculty change: Walter E. Dandy, associate professor of clinical surgery, has been promoted to clinical professor of neurosurgery.

Promotions to associate professors: Harvey B. Stone, in clinical surgery; Jonas S. Friedenwald, in clinical ophthalmology; Edwin C. Andrus, in medicine, and Arthur Grollman, in physiology. Justin M. Andrews, Sc.D., associate in protozoology, has been promoted to associate professor in the School of Hygiene and Public Health.

The following gifts are announced: $5,700 under J. Whitridge Williams, chief of the department of obstetrics; $13,626 under Edwards A. Park, chief of the department of pediatrics, and $35,450 under Adolf Meyer, director of the Phipps Psychiatric Clinic.

A general system of retirement allowances has been established so that each member of the faculty, on retirement at the age of 70, will receive an annuity for life. The pension system provides retirement allowances for teachers of the ranks of professor and associate professor, under which a minimum annuity of $3,000 will be available for those who come within the scope of pension expectations from the Carnegie Foundation. For all other professors and associate professors the plan provides a retirement allowance at the age of 70 equal to half of salary up to a maximum of $4,000. The plan also provides for fair treatment of certain exceptional cases of high salaried teachers whose present age is such that

the regular provisions are inadequate. Since 1927, it is reported, there has been in effect a contributing pension plan for the school of hygiene and public health and a similar plan in the institute of law since 1929.

Marquette University School of Medicine

Plans for a new $500,000 building have been announced. Construction will begin in August and it is anticipated that the building will be ready for use in the fall of 1932. The five-story building of Gothic design will occupy a double block on the university campus, adjoining the dental school and will accommodate 375 students. A museum of pathology, a museum of anatomy, an art room, an x-ray department and the student health service are among the features planned in addition to ample provision for administration, class and laboratory work.

University of Georgia Medical Department

William L. Moss has been elected dean to succeed H. W. Goodrich, resigned, and professor and head of the department of public health and preventive medicine.

Charles W. Crane has been appointed professor of hospital administration.

Columbia University Medical Center

Edward L. Harkness has given an Eye Institute to Presbyterial Hospital. The institute will be under the direction of John M. Wheeler, professor of ophthalmology in the College of Physicians and Surgeons. The new building will be twelve stories high and will be the first unit in a group of projected specialty hospitals which are to surround the great central garden court lying to the south of the main buildings of the medical center.

It will provide facilities for treatment and hospital care for all classes of eye patients, also for the teaching of medical students and the training of nurses in this special field, and for research in all phases of ophthalmology.

George Washington University School of Medicine

Earl Baldwin McKinley, professor of bacteriology in Columbia University College of Physicians and Surgeons and director of the School of Tropical Medicine of the University of Porto Rico, has been appointed dean to succeed Wm. C. Borden, resigned. The honorary degree of doctor of science and the title professor emeritus of medicine were conferred on Dr. Borden.

Harvard Medical School

New appointments: John L. Bremer, Hersey professor of anatomy; George Bernays, Parkman professor of anatomy; Frederic Thomas Lewis, James Stillman professor of comparative anatomy.

Alexander F. Milton, associate professor of physiology, is commander of an expedition which sailed from Boston in June to make an aerial survey of the coasts and fiords of Labrador. The American Geographical Society sponsored the expedition.

University of Virginia Department of Medicine

Tiffany J. Williams, of Great Falls, Mont., has been appointed professor of obstetrics, succeeding Francis B. Carter, who accepted a similar position with Duke University School of Medicine.

James R. Cash, since 1924 professor of pathology in Peiping Union Medical College, has accepted the Walter Reed professorship of pathology vacated by the death of Harry T. Marshall.

Tufts College Medical School

A department of preventive medicine is being established under a grant re-

ceived from the Commonwealth Fund. Students will be taught preventive medicine from the standpoint of the individual patient so that they will feel the proper responsibility in dealing with actual cases. Dwight O'Hara, of Waltham, Mass., has been appointed professor and head of this department.

Washington University

At the seventieth annual commencement the following gifts were announced: $72,500 for the McMillan Eye, Ear, Nose and Throat Hospital; $5,000 for a fund in fundamental sciences in the medical school; $1,000 for a fellowship in bacteriology; $1,800 for a fellowship in pediatrics; $1,200 for a fellowship in neurological surgery; $3,500 for research on the sinuses; $14,762 for the ophthalmology department; $50,000 for the Mallinckrodt radiology building, and $20,000 for the urologic clinic in this building.

Carl F. Cori, formerly of the State Institute for the Study of Malignant Diseases, Buffalo, N. Y., has been appointed professor of pharmacology, succeeding Herbert S. Gasser.

University of Illinois College of Medicine

At the commencement exercises of the Colleges of Medicine and Dentistry and the School of Pharmacy of the University of Illinois, June 13, the commencement address was given by Edward H. Kraus, dean of the College of Pharmacy of the University of Michigan, on "Some Pertinent Aspects of Higher Education."

The William Beaumont prize of $100 for the best research on diseases of the gastro-intestinal tract was awarded to Alexander J. Nedzel, for work on the "Passage of Bacteria Through the Splanchnic Body Surface."

The University of Illinois Chapter of Sigma Xi prize of $25 for the best original piece of scientific investigation by a student during the year was awarded to Morris A. Kaplan, on "A Modified Method for the Preparation of Hematoporphyrin."

Charles Davison, professor of surgery, emeritus, delivered an address at the Medical Historical Club, May 6, on "Reminiscences."

The College of Medicine of the University of Illinois Chapter of the Sigma Xi held a meeting for the initiation of new members, May 20, 1931. At this meeting Dr. F. R. Moultin, past national president and member of the national executive council, presented greetings from the national organization. Greetings from Northwestern Chapter were presented by Franklin D. Barker and from the University of Chicago Chapter by E. S. Bastin. The scientific discourse was given by O. F. Kampmeier on "The Origin and Development of the Human Thoracic Duct."

The Medical Research Club held its two hundredth meeting in the Library of the Research Laboratory Building, May 27.

The Research Club was founded soon after the University of Illinois had taken over the College of Physicians and Surgeons, as the College of Medicine of the University. The influence of this club on the intellectual life and atmosphere of the College of Medicine has been far-reaching. Since its formation, a chapter of Sigma Xi, a medical history club, and a clinical conference have been founded. Each organization holds biweekly meetings. As a result of these organizations there are more than 120 students from the medical, dental and pharmacy faculties registered in the graduate school.

University of Southern California School of Medicine

The Council on Medical Education and Hospitals of the American Medical Association has voted to give its approval to the two years of medicine as now given, and also endorsed the plans thus far made

for the third year, which is to begin next fall. Detailed information concerning the financial status of the school, new additions to the faculty and future plans led the Council to grant approval, which had hitherto been withheld. Paul S. McKibben, LL.D., professor of anatomy, is acting dean. New additions to the faculty include Charles Joseph Rowan, formerly at State University of Iowa School of Medicine, professor of surgery; and Lyle G. McNeile, Los Angeles, professor of obstetrics.

University of Chicago

The McElwee Memorial Home for Destitute Crippled Children was recently dedicated. The Gertrude Dunn Hicks Memorial Hospital, the fourth unit for the care of sick children and the study of their diseases, was dedicated June 22. The hospital, located near Billings Memorial Hospital, has 50 beds, making the hospital facilities of the Midway medical center almost 600 beds. It was made possible by a gift of $300,000 from Mrs. Gertrude Dunn Hicks.

University of Maryland School of Medicine

The legislature has appropriated $1,500,000 for building and equipment of a new university hospital.

The university announces the organization of a new division in the department of general surgery, that of neurosurgery. Charles Bagley, Jr., will be head of this department with the title of professor of neurosurgery. Richard G. Coblentz will be associated with him with the title of associate in neurosurgery.

Robert W. Johnson, Jr., has resigned as professor of orthopedic surgery. His position will be filled by Allen Fiske Voshell, associate professor of orthopedic surgery at the University of Virginia.

Promotions: W. H. Toulson, from clinical professor of genito-urinary diseases to professor; Nathan Winalow, from clinical professor of surgery to professor of clinical surgery; Page Edmunds, from clinical professor of industrial surgery to professor of clinical and industrial surgery; Walter D. Wise, Frank S. Lynn, Elliott H. Hutchins and Charles Reid Edwards, from clinical professor of surgery to professor of clinical surgery; Harry M. Robinson, from clinical professor of dermatology to professor of clinical dermatology; J. Dawson Reeder, from associate professor of diseases of the colon and rectum to clinical professor; Charles C. Habliston, from assistant professor of medicine to associate professor; Ralph P. Truitt, from assistant professor of psychiatry to associate professor; H. M. Foster, from associate in surgery to associate professor; Thomas B. Aycock, from instructor in anatomy and surgery to assistant professor of anatomy and associate in surgery; O. G. Herne, from associate in physiology to assistant professor of physiology.

Resignations: Robert W. Johnson, Jr., professor of orthopedic surgery; Harry S. Sullivan, associate professor of psychiatry.

Western Reserve University

The formal dedication of the Lakeside Hospital group on June 17 brought to completion the $15,000,000 Western Reserve Medical Center.

Delegates of the leading scientific, medical, educational, social and civic organizations from all sections of the country came to attend the ceremonies.

Representing the latest in architecture, design and equipment, Lakeside Hospital and its affiliated institutions are models of modern hospitalization. The Western Reserve University medical group is comprised of, in addition to the Lakeside group containing Lakeside Hospital and the Mather, Robb, Lowman and Harvey Houses, nurses' and physicians' quarters, and Hanna House, private patients' pavilion, the Schools of Medicine, Dentistry, Pharmacy and Nursing, Babies' and Chil-

dren's Hospital, Maternity Hospital, the Institute of Pathology, Rainbow Hospital and the power house and service building.

As a constant benefactor of the university and its great medical center, and one who for nearly half a century has been the chairman of the Lakeside Hospital Board, an illuminated appreciation was presented to Mr. Mather who presided at the dedication.

The address of dedication was delivered by Dr. Hans Zinsser, professor of bacteriology, Harvard University Medical School. Western Reserve University conferred the honorary degree of Doctor of Science on him.

The university also conferred the degree on Samuel Clark Harvey, professor of surgery, Yale University School of Medicine; Evarts A. Graham, professor of surgery, Washington University School of Medicine; Alphonse Raymond Dochez, professor of medicine, Columbia University College of Physicians and Surgeons; and Alfred Newton Richards, professor of pharmacology, University of Pennsylvania School of Medicine.

The degree doctor of laws was conferred on Henry Asbury Christian, Hersey professor of the theory and practice of physic, Harvard University Medical School, and James Ewing, professor of pathology, Cornell University Medical College.

LaVerne A. Barnes, senior instructor in bacteriology, has resigned to accept a position as immunologist with the Massachusetts State Department of Health.

James A. Doull, professor of hygiene and public health, has been appointed visiting professor of bacteriology in the University of Chicago for the summer session.

The senior prize in obstetrics was awarded to Edward Payson Judd. The prize is an award in income from a gift made several years ago by Dr. Edwin C. Garvin, Cleveland. Yasha A. Venar, a sophomore, received the Herbert A. Steuer Memorial award for outstanding research work in the department of anatomy. The cash award was given for his work entitled "Study of Skeleton Weights and Densities of Full-Termed and Premature Children. Suggested Index Assessment of Maturity by X-Ray Plates." The memorial fund was created by friends of the late Dr. Steuer, senior demonstrator in anatomy at Western Reserve University, after his death in 1929.

University of Missouri School of Medicine

New appointments to the medical faculty: Newell R. Ziegler, associate professor of bacteriology. Hospital staff: E. D. Baskett, R. S. Battersby, M. E. Cooper, F. E. Dexheimer, K. D. Dietrich, A. W. Kampschmidt, H. P. Muir, A. R. McComas, F. G. Nifong, M. D. Overholser, R. W. Siddle. Resident physicians, University Hospitals: Horace E. Allen and Louis F. Howe.

University of California Medical School

Faculty changes in title: W. S. Franklin from clinical professor of ophthalmology to emeritus clinical professor of ophthalmology.

Promotions: E. H. Falconer, from associate clinical professor of medicine to clinical professor of medicine; E. S. Kilgore, from associate clinical professor of medicine to clinical professor of medicine; H. Lisser, from associate clinical professor of medicine to clinical professor of medicine; E. W. Twitchell, from associate clinical professor of neurology to clinical professor of neuropsychiatry; J. L. McCool, from associate clinical professor of ophthalmology to clinical professor of ophthalmology; Mary E. Botsford, from associate clinical professor of anesthesia to clinical professor of anesthesia; Miriam E. Simpson, from assistant professor of anatomy to associate professor of anatomy; S. F. Cook, from assistant professor of physiology to associate professor of physiology; D. M. Greenberg,

from assistant professor of biochemistry to associate professor of biochemistry; Rachel L. Ash, from assistant clinical professor of medicine and pediatrics to associate clinical professor of medicine and pediatrics; H. Harris, from lecturer in medicine to associate clinical professor of medicine; Eva C. Reid, from assistant clinical professor of psychiatry to associate clinical professor of psychiatry; F. C. Cordes, from assistant clinical professor of ophthalmology to associate clinical professor of ophthalmology; E. Ogden and I. L. Chaikoff, from instructors in physiology to assistant professors of physiology; D. W. Bennett, from instructor in medicine to assistant professor of medicine; O. W. Jones, from instructor in surgery to assistant professor of surgery; Jessie L. Delprat, from instructor in medicine to assistant clinical professor of medicine; M. H. Hirschfeld, from instructor in neuropsychiatry to assistant clinical professor of neuropsychiatry; W. D. Horner, from instructor in ophthalmology to assistant clinical professor of ophthalmology.

New appointments: J. F. Rinehart, assistant professor of pathology; M. L. Montgomery, assistant professor of surgery; N. Van Patten, lecturer in medical bibliography; A. H. Rowe, lecturer in medicine; A. E. Larsen, instructor in medicine.

Leaves of absence: R. L. Richards, lecturer in psychiatry, for the year 1931-1932; J. M. D. Olmsted, professor of physiology, from July, 1931, to Dec. 31, 1931; Esther Rosencrantz, associate professor of medicine, from July, 1931, to Dec. 31, 1931; Margaret Schulze, assistant professor of obstetrics and gynecology and pathology, from July, 1931, to Dec. 31, 1931.

University of Colorado School of Medicine

Appointments: Harry Eugene Teasley, instructor in bacteriology; Ernst A. Schmidt, assistant professor of surgery (radiology); John Wesley Meyers, fellow in psychiatry; Charles A. Rymer, resident and instructor in psychiatry; Morris Jacob Baskin, instructor in obstetrics and gynecology.

Promotions: Richard W. Whitehead, from associate professor to professor of physiology and pharmacology; Rodney Humphrey Jones, from instructor to assistant professor of clinical pathology; David M. Skilling, from assistant to instructor in pathology; Jack G. Hutton, from assistant to instructor in dermatology and syphilology; William Henry Halley and Harold Burrows Henderson, from instructors to assistant professors of obstetrics and gynecology; Frank Robert Spencer, from assistant professor to associate professor of otolaryngology.

Franklin G. Ebaugh, professor of psychiatry, has been granted a year's leave of absence beginning September 1. This will enable him to accept an invitation to take part in the activities of the recently created division of psychiatric education of the National Committee for Mental Hygiene. He has been given the task of making a survey of present day methods of undergraduate and graduate psychiatric instruction. The facts of this survey will be obtained by visiting each medical school and conferring with the deans and heads of the departments of psychiatry and pediatrics. His headquarters will be in Denver.

New York Post-Graduate Medical School

In accordance with the agreement between the New York Post-Graduate Medical School and Hospital and Columbia University, effective July 1, 1931, by which the former becomes the Postgraduate School of Medicine of Columbia University, an administrative board of postgraduate studies in medicine has been established by President Nicholas Murray Butler, on which will be represented members of the governing body of the university, the undergraduate medical

school and the postgraduate school of medicine.

Under the terms of the affiliation, this board will have general oversight and control of all postgraduate instruction in medicine offered by the university, whether at the Medical Center, the Postgraduate Medical School or elsewhere in the city, and is constituted as follows: Willard C. Rappleye, chairman, Linsly R. Williams, Howard Lee McBain, James C. Egbert, Walter W. Palmer, James W. Jobling, Frederick Tilney, Arthur F. Chace, Herman O. Mosenthal, Howard F. Shattuck, Edward H. Hume, Harry S. Dunning, Lewis F. Frissell and Frank D. Fackenthal.

On nomination of President Butler, the trustees of the university have appointed Edward H. Hume director and Alan R. Anderson associate director of the New York Post-Graduate Medical School.

Tulane University School of Medicine

Announcement is made of the closing of an agreement between Tulane University and the Commonwealth Fund for the participation of the Medical Department of the University in a program for the promotion of rural health service which the Fund has undertaken in Mississippi in cooperation with the state health department. Tulane will be directly concerned only with the medical education features of the program, which will go into operation with the opening of the next (1931-1932) session.

A large part of the program is planned with the idea of promoting preventive medicine and the prevention of disease as a part of the health service rendered by practicing physicians in rural communities, especially in Mississippi, one of the three states in the United States selected for these activities, which are intended to serve as demonstrations of what might be done in other states.

Two counties in Mississippi, Lauderdale and Pike, have been selected in which the rural health activities will be concentrated. In these counties a program of well organized rural health service will be carried out by an adequate, competent organization in cooperation with the physicians of the county. Everything will be done to help them in every way possible to render the best health service in their respective communities. Among other things they will be given opportunities to go to Tulane for postgraduate courses, planned especially to prepare them to give better health service in their practice. The public health work in these counties, which is separate from the medical education part of the general program at Tulane, will be fostered and guided by the Mississippi state health department of which Dr. F. J. Underwood is director.

The university will receive an annual appropriation of $25,000 over a period of years to make it possible to develop and broaden courses in preventive medicine and to provide special facilities and opportunities for postgraduate work for rural physicians.

A special department of preventive medicine has been established in the School of Medicine and in addition to this increased interest, attention will be given to prevention of disease by all the clinical departments in the instruction to undergraduate students.

In the Graduate School of Medicine additions will be made to the teaching program in the different fields of instruction for graduate physicians, and preventive medicine will now receive the full consideration which its importance merits.

In addition to the donation for preventive medicine and other instruction at Tulane, provision is made for five free scholarships each year for undergraduate medical students from Mississippi. These scholarships give the student $1,200 each year for a period of four years until he graduates. Recipients of these scholarships must agree to return to Mississippi

and practice medicine in a rural community for a period of at least three years. For the purpose of these awards, a town of not more than 5,000 population is considered within the limitations of a rural community.

By the fourth year and thereafter there should be a total of twenty students in Tulane Medical School from Mississippi on these scholarships.

These scholarships will be awarded to those selected by the Tulane School of Medicine from among the qualified applicants from Mississippi. There are nearly forty applicants this year and the selections will be made shortly. Applicants must have all of the premedical college credits and all other requirements for admission to the study of medicine before they will be considered for these scholarships.

In addition to these scholarships for undergraduate medical students, provision has also been made for postgraduate courses for practicing physicians from Mississippi. Each year fifteen physicians will be sent to the Tulane Graduate School of Medicine to take practical courses of instruction extending over a period of four months, on a fellowship basis. In order to enable them to leave their practices for this purpose, the Commonwealth Fund takes care of their tuition at the school and makes allowances for their travel to and from New Orleans and $250 per month besides. This provision will enable country physicians to get the practical postgraduate training they need to enable them to keep up with the advances in medical knowledge.

The selection of these graduate students is entirely in the hands of the Mississippi State Health Department and the representatives of the Commonwealth Fund.

Temple University School of Medicine

John Royal Moore, chief surgeon of the Shriners' Hospital for Crippled Children, was appointed professor of orthopedics. Carroll S. Wright was appointed professor of dermatology and syphilology.

Medical School of South Carolina

Faculty changes: New assistant professors: Hillyer Rudisill, Jr., roentgenology and physical therapy; John Hampton Hoch, botany and pharmacognosy, and Robert Lane McCrady, obstetrics and gynecology.

Assistants: Francis Raymond Price, surgery; Benjamin Kater McInnes, urology, and George G. Durst, chemistry.

Instructors: Eleanor W. Townsend, clinical pathology, succeeding Clarendon B. Woods, resigned, and Archibald E. Baker, Jr., surgery.

Our Post-Convention Trip

The July JOURNAL announced that a special Caribbean Cruise was available for the members of the Association, their families and friends to sail from New Orleans December 2 immediately following the close of the 42nd Annual Meeting. This cruise, arranged by the United Fruit Company, is of nine days duration, visiting Havana, Cuba, and Puerto Castilla, Honduras. The cost of this trip on the all-expense plan New Orleans to New Orleans is $95.00 (first class) which includes meals and accommodations on the steamer, deck chairs and elaborate shore programs. The cruise will be made on one of the palatial oil burning steamers of the GREAT WHITE FLEET. The rooms are all large, double outside rooms equipped with every convenience. A special feature the program at Havana will include a visit to the Medical College of the University of Havana. For further information, write to the Secretary of the Association.

General News

Graduate Medical Education

In graduate medical education, field work is a consideration of major importance. Even though the university possesses its own large, general, clinical establishment, say, for example, 1,000 patient beds and 250,000 annual dispensary patient visits, it will be inadequate for the whole needs of any save a small number of graduate medical students having clinical goals. However, there are many extramural hospitals; and if one looks at the matter from the standpoint of field work, enough of these may be made available; namely, in those hospitals which have high grade clinical staff members who are qualified to act as clinical preceptors. These hospitals need not be located in the university city; they may be located anywhere and become utilized for graduate medical education on lines parallel to their use for the internships which are so commonly used. Field work for student physicians need not be confined to hospitals. The agency of next importance is private practices of preceptors, used in connection with the preceptors' hospital services. Experience has shown that student physicians who have become basically well trained in the clinical specialties render exceptionally intelligent, dependable and stimulating field services. The cost factor in graduate medical education is dismaying. No hope is to be entertained that such service can result in a self-supporting service income. That portion of the service which is not of the assistantship or research type and which is conducted solely for the student physicians should yield some of the necessary income, and to a significant degree. A formal basic instructional period is normally the first period of a student physician's studies. For this period he should pay instructional fees. Where hospital "maintenance" is provided for special residents, such maintenance is to be regarded as the whole or a portion of the stipend.

We should awaken to the truth that efficient graduate medical education is quite as difficult to exemplify as is efficient undergraduate medical education. Its horizon and undertakings are too great for it to be, efficiently, a mere by-product or appendage of older entities. Modernity dictates that it must, when serious, be in any university which essays it a real and large university entity.—G. H. MEEKER, *J. A. M. A.*, May 9, 1931.

If graduate medical instruction in America is to attain any great degree of usefulness and is to make a deep imprint on the course of medical practice, a scheme must be evolved by which it can effectively be carried to the physician. Such instruction is clearly the function of the state. The instruction should be largely clinical and this in turn presupposes some sort of traveling clinic.—J. L. MCLESTER, *J. A. M. A.*, May 9, 1931.

Additional Hospitals Approved

The Council on Medical Education and Hospitals of the American Medical Association has given its approval to the following hospitals since the publication of the last previous list in March.

Hospitals Approved for Intern Training: Woodmen of Union Hospital, Hot Springs National Park, Ark.; Mercy Hospital, Cedar Rapids, Iowa; Bishop Clarkson Memorial Hospital, Omaha; St. John's Riverside Hospital, Yonkers, N. Y.; Wesley Hospital, Oklahoma City; St. Mary's Infirmary, Galveston, Texas; St. Joseph's Infirmary, Houston, Texas.

Hospitals Approved for Residencies in Specialties: Leo N. Levi Memorial Hos-

pital, Hot Springs National Park, Ark.; Seaside Hospital, Long Beach, Calif.; Fabiola Hospital, Oakland, Calif.; Samuel Merritt Hospital, Oakland, Calif.; Santa Clara County Hospital, San Jose, Calif.; Silver Cross Hospital, Joliet, Ill.; Truesdale Hospital, Fall River, Mass.; Millard Fillmore Hospital, Buffalo; New York State Psychiatric Institute and Hospital, New York; Duke Hospital, Durham, N. C.; Children's Hospital, Columbus, Ohio.

Curriculum of Peiping Union Medical College

The curriculum covers four years of prescribed work and a fifth, intern, year. The "hours" total 3,870. They are distributed as follows.

Anatomy, 561; physiology, 223; pharmacology, 176; biochemistry, 225; bacteriology, 132; pathology and parasitology, 330; general medicine, including dermatology and syphilology, 748; pediatrics, 110; neurology, 77; general surgery, 583; ophthalmology, 60; laryngology, 60; obstetrics and gynecology, 386; psychiatry, 66; hygiene, 133.—*Nat'l M. J. China,* June, 1931, p. 295.

Medical Fellowship Board

The next annual meeting of the Medical Fellowship Board of the National Research Council will be held September 19. Applications to be considered at that time should be filed on or before August 15. Dr. G. Carl Huber, dean of the Graduate School, and professor and head of the department of anatomy in the University of Michigan, is chairman of this Board.

James C. Todd Prize in Clinical Pathology

The Colorado Society of Clinical Pathologists has selected the name "The Dr. James C. Todd Prize in Clinical Pathology" for an award to be given to the student who has shown the greatest proficiency in laboratory work in clinical pathology at the University of Colorado School of Medicine.

New Mexico State Board of Medical Examiners

A new state board of medical examiners has been appointed for two years as follows: Wallace H. Livingston, Santa Fe, president; Robert L. Bradley, Boswell, vice-president; Percy G. Cornish, Jr., Albuquerque, secretary-treasurer; Earle L. Ward, Santa Fe, and Frederick F. Doepp, Carlsbad.

Degree in Occupational Therapy

Milwaukee-Downer College, Milwaukee, is now offering a bachelor of science degree with a major in occupational therapy. The requirements have been planned so that they give, in addition to a cultural background, a sound fundamental training in the sciences underlying the use of occupations as applied to treatment in mental and physical diseases and injuries, the technical training in occupations used as treatment, and clinical experience in all fields of medicine where this form of treatment is used. The course requires five years for its completion; the degree is granted after the fulfillment of the academic requirements, and a certificate, after nine months of clinical training in hospitals and other organizations.

American Board of Obstetrics and Gynecology

Sixty-five out of seventy-four applicants passed the final examination for certification in Philadelphia, June 6. Action on four candidates was held under advisement and five failed to pass.

Graduate Course in Ophthalmology

A graduate course in ophthalmology is to be given by members of the faculties of the four medical schools in Chicago, beginning September 1, to run for a year.

Lectures and clinics will be held at the four universities and ten hospitals on a rotating schedule. Didactic instruction will be given from 8 to 9:30 a. m. and from 5 to 6:30 p. m.; clinical instruction will be given between 10 a. m. and noon and between 2 and 4 p. m. The course is limited to twelve students. The fee is $1,000, of which $100 is to be paid on application.

Further information may be obtained from Dr. Richard C. Gamble, secretary, 30 North Michigan Avenue, Chicago.

Elizabeth Storck Kraemer Memorial Fund

This Fund was established by a gift of $100,000 from Pierre S. and Lamont duPont for the foundation of a tumor clinic in Jefferson Hospital by Dr. William H. Kraemer. The clinic will be a subdivision of the surgical department of the hospital and will engage in research on the treatment of cancer. As chemical research will be one of the major functions of the clinic, the cooperation of the chemical department of the duPont Company is assured.

Catholic Hospital Association

Excerpt from the resolutions unanimously adopted at the closing meeting of the Catholic Hospital Association of the United States and Canada at its sixteenth annual convention, held in St. Thomas College, St. Paul, Minn., June 19, 1931:

BE IT RESOLVED, that this Association hereby encourages its member institutions to place a program of intern instruction upon a formal and solid basis; that it encourages as many of its members as can possibly do so to provide opportunities for advanced medical instruction to second and third year interns, and that it authorize its executive officers to undertake during the course of the next year a special study of the needs of our hospitals and the facilities afforded by them for the promotion of advanced medical teaching.

King's College London

An addition to present buildings to house the new department of anatomy is being built at a cost of about $300,000. Increased laboratory, research and museum accommodation will be provided. A suite of rooms for animal experiment work is being included.

The college is associated on the clinical side with four of the London teaching hospitals: King's College, Charing Cross, Westminster and St. George.

American Medical Association Section on Pediatrics

At the annual meeting held in June the Executive Committee recommended that a committee on medical education be created and nominated T. C. Hempelmann, St. Louis; Henry F. Helmholz, Rochester, Minn.; J. V. Greenebaum, Cincinnati, and W. A. Mulherin, Augusta, Ga. The recommendation was adopted.

The University City of Rome

A recent decree of the prime minister establishes the confines of the so-called university city of Rome. The area comprises a tract about the Policlinico Umberto I as a center and will contain all the institutes and buildings belonging to the various faculties, except the rectorate, or the president's office, which will remain in the Palazzo della sapienza. For the faculty of medicine there will be erected the new seats of the institute of hygiene and the institute of bacteriology, and the George Eastman dental clinic, already in process of construction, will be completed.

Personals

Willard C. Rappleye, dean of Columbia College of Physicians and Surgeons, has been appointed chairman of the medical advisory committee of Henry Street Settlement, New York.

Hugh H. Young, professor of urology in Johns Hopkins University, received the honorary degree of D. Sc. from the University of Belfast, Ireland.

Isaac A. Abt, professor of pediatrics in Northwestern University Medical School, was given the honorary degree of D. Sc. by Northwestern University at the recent commencement.

Simon H. Gage, emeritus professor of histology and embryology in Cornell University, was guest of honor at a dinner given by the Wistar Institute of Anatomy in Philadelphia on the occasion of his 80th birthday.

Reuben Peterson, since 1901 professor of obstetrics and gynecology in the University of Michigan Medical School, has resigned.

Edward H. Cary, dean emeritus of Baylor University College of Medicine, has been elected president of the American Medical Association.

Malcolm H. Soule of the University of Michigan Medical School, has returned to Ann Arbor from the School of Tropical Medicine in San Juan, Porto Rico, where he had been a visiting professor for three years.

Alfred Hume, former chancellor of the University of Mississippi, one of those unceremoniously "not reappointed" last year as the result of the Bilbo raid on education in that state, and later professor of mathematics in Southwestern University, Memphis, has been selected for the presidency of Branham and Hughes Military Academy, Spring Hill, Tenn. Mr. Hume had been a member of "Ole Miss" faculty for about forty years and had proved himself to be a very capable administrator although not a "Bilboist."

Ross V. Patterson, dean of Jefferson Medical College, received the honorary degree of D.Sc. from La Salle College.

John Chalmers DaCosta, Samuel D. Gross professor of surgery in Jefferson Medical College, has been elected honorary deputy chief of the Philadelphia Fire Department.

Ira Vaughan Hiscock, associate professor of public health at Yale University, has been promoted to a professorship.

William H. Mook, assistant professor of clinical dermatology, Washington University School of Medicine, was elected president of the American Dermatological Society.

Carl Barck, professor emeritus of ophthalmology in St. Louis University School of Medicine, has received the degree of golden doctorate in medicine from the University of Freiburg.

George Gellhorn, director of the department of gynecology and obstetrics, St. Louis University School of Medicine, was elected president of the American Gynecological Society.

Alice Hamilton, for many years assistant professor of industrial medicine at Harvard University Medical School, will conduct special research in industrial sickness insurance under a grant of money from a $1,000,000 trust fund established

by Gustav Oberlaender, Reading, Pa., to support professional and research work that will promote good will between the United States and German-speaking countries.

Otto H. Schwarz, professor of obstetrics and gynecology in Washington University School of Medicine, was elected secretary of the American Gynecological Society.

Arthur W. Proetz, assistant professor of clinical otolaryngology at Washington University Medical School, has received the $500 Casselberry prize of the American Laryngological Association for notable work in his field.

Alfred Stengel, professor of medicine, University of Pennsylvania School of Medicine, has been appointed vice-president in charge of medical affairs in the university.

Eugene L. Opie, professor and head of the department of pathology in the University of Pennsylvania, received the degree D.Sc. from Yale University.

Samuel R. Detweiler, professor of anatomy in Columbia University, received the honorary degree M.Sc. from Yale University.

Belford Shelmire of Baylor University College of Medicine, was awarded a silver medal by the American Medical Association at its annual meeting in June for original work on the spread of typhus fever by rat mite.

J. Parsons Schaeffer and Warren B. Davis of the department of anatomy in Jefferson Medical College, were awarded gold medals by the American Medical Association at its annual meeting in June for research on the anatomy of the nasal sinuses.

Harvey Cushing, Moseley professor of surgery in Harvard Medical School, received the D. Sc. degree at the 1931 commencement of the university.

William Gerry Morgan, professor of gastro-enterology in Georgetown University School of Medicine, has been appointed a member of the Board of Regents of the University.

Arthur Isaac Kendall, professor of research bacteriology in Northwestern University Medical School, delivered the James A. Patten lecture at the university, July 22.

Russell M. Childer, chairman of the department of medicine in the University of Chicago, has resigned. He will continue as professor of medicine.

Lawrence A. Royster, professor and head of the department of pediatrics in the University of Virginia, has been reappointed a member of the State Board of Health for seven years.

Phillips F. Greene, associate professor of surgery in the University of Wisconsin School of Medicine, leaves for China to head the surgical unit in the Yale University Hospital at Changsha, Hunan, where he was previously located.

Louise Pearce, of the Rockefeller Institute, will serve the Peiping Union Medical College as visiting professor of syphilology for six months beginning October 1.

H. L. Amoss, professor of medicine in Duke University, will serve the Peiping Union Medical College as visiting professor of medicine for four months.

Marvin Williams of the Mayo Foundation has been appointed physicist in the department of roentgenology at Peiping Union Medical College for a two year period beginning August 1.

Arnold Pillat, of Vienna, has been appointed professor and head of the department of ophthalmology in Peiping Union Medical College.

Francis R. Fraser, director of the medical clinic and professor of medicine in St. Bartholomew's Medical School, London, will deliver the third series of Abraham Flexner Lectures at Vanderbilt University during the year 1932-1933.

Joseph M. Looney, acting professor of physiological chemistry and toxicology in Jefferson Medical College, has accepted an appointment with the Memorial Foundation for Neuro-Endocrine Research, Worcester, Massachusetts State Hospital as chief of laboratories.

Charles H. Danforth of Stanford University has been appointed exchange professor at Harvard Medical School for the coming year.

A. R. Dochez and Yale Kneeland, Jr., of Columbia University College of Physicians and Surgeons will carry on the research on the common cold made possible by a grant of $45,000 from the Rockefeller Institute.

W. R. Tweedy, associate professor of physiology in Loyola University School of Medicine, received a similar grant for work on the further purification of the parathyroid hormone.

Colonel Charles F. Craig has been appointed professor and chief of the department of tropical medicine in Tulane University School of Medicine.

Harry J. Deuel, Jr., professor of biochemistry in the University of Southern California, was given a research grant by the American Medical Association for the study of glycogenesis in animals after the administration of various sugars.

Daniel A. McGinty, associate professor of physiology in Emory University School of Medicine, received a grant from the American Medical Association for the continuation of studies on the blood in the coronary circulation.

George Herrmann, associate professor of medicine in Tulane University School of Medicine, has been appointed professor of clinical medicine in the University of Texas School of Medicine.

Herbert L. Northrup, head of the department of surgery in Hahnemann Medical College, received the honorary degree of master of arts at the eighty-third annual commencement of the college.

Thurman D. Kitchin, president of Wake Forest College and dean of the School of Medicine, was named to serve on the commission for the improvement of the laws of North Carolina.

Richard W. Linton has resigned as assistant professor of bacteriology in Columbia University College of Physicians and Surgeons to go to India to conduct a research in cholera with the Indian Research Fund Association.

Deaths

John Anderson, head of the division of medicine at the Henry Lester Institute for Medical Research in Shanghai, China, died last March. He was best known for his work on cerebrospinalmeningitis.

John M. Withrow, former professor of gynecology in the Medical College of Ohio, the Laura Memorial Woman's College, Miami Medical College and the University of Cincinnati College of Medicine, died in May, aged 76.

Charles K. Mills, the well known neurologist and one time professor of neurology in the Woman's Medical College and the University of Pennsylvania School of Medicine, died in May, aged 85.

Josiah Medbury, for many years professor of anatomy in Ohio State University College of Medicine, died, aged 78, of lobar pneumonia and arteriosclerosis.

John O. Polak, professor and head of the department of obstetrics and gynecology in Long Island College of Medicine, died suddenly in June of heart disease.

Joseph H. Hathaway, assistant professor of anatomy in the University of Michigan, died in June, aged 52. Dr. Hathaway was at one time dean and professor of anatomy in the Detroit College of Medicine and Surgery.

L. Webster Fox, professor of ophthalmology in the Graduate School of Medicine of the University of Pennsylvania, died in June, aged 78, from cardiorenal disease.

Charles Allen Porter, professor emeritus of clinical surgery in Harvard Medical School, died in April, aged 65.

Albert E. Sterne, professor of nervous and mental diseases in Indiana University School of Medicine, died in June, aged 65.

Lewis P. Drayer, professor of pediatrics in Indiana University School of Medicine, died in June, aged 61, of nephritis.

Hobart Amory Hare, professor of therapeutics in Jefferson Medical College, died in June, aged 69, of pneumonia.

Leonard N. Boston, professor of physical diagnosis in the University of Pennsylvania Graduate School of Medicine, died of erysipelas, aged 60.

Paul T. Harper, clinical professor of obstetrics in Albany Medical College, died of pneumonia, aged 50.

S. E. Prowpe, dean of the faculty of medicine, University of Manitoba, Winnipeg, died suddenly in August.

Abstracts of Current Literature

Hospital Training of Interns

It is greatly to the intern's advantage to serve a rotating service in a hospital having active services in the various major branches of medicine and with a fairly rapid turnover of patients. One of the essentials of their training is the art of handling people, and the opportunity of acquiring and developing it should be fully afforded the intern and he can profit much in this regard from close association with his chiefs. He may thus learn that often men get along more "because of tact than of talents."

There is nothing more helpful to the alert intern than well arranged clinicopathologic conferences. They should be held at least weekly, under the direction of the hospital pathologist and his associates. At such meetings a lantern slide giving a brief abstract of the patient's history should be thrown on the screen to be discussed and elaborated on by the men who have had the patient under observation. The pathologist continues with a discussion of the gross pathologic observations at operation or autopsy, demonstrating the specimens, previously prepared in Kaiserling's or Lundquist's solution and painted with gelatin to render them odorless and dry, supplementing his description of the gross specimen with a demonstration by means of the projecting microscope of the pathologic changes. Any hospital worthy of giving the intern year should have a competent pathologist interested in teaching and willing and able to conduct these most stimulating and helpful conferences.

All well conducted hospitals hold periodic staff meetings, which should always be open to the interns. Such meetings are held monthly in most hospitals, although in the full-time staff institutions a weekly meeting is conducted in which the interns take an actvie part. At these meetings interns should read at least one paper each year, usually based on a clinical study of a large series of cases taken from the hospital records, with a review of the literature bearing on the subject under consideration, the papers to be dsicussed and criticized by the men of the staff. But this is not enough; besides the regular staff meetings and the clinicopathologic conferences a series of seminars, arranged especially in the interest of the intern and dealing with all the major specialties, should be conducted by the members of the permanent staff. The roentgenologist should have periodic meetings in his department during which films are examined and roentgen diagnosis and differential diagnosis thoroughly discussed.

Every hospital having an intern service should possess a well stocked working library. In addition, it should subscribe to the best and more important American medical journals.

If interns were asked to set down with perfect frankness an account, as they see it, of the service given them and of their unalloyed opinion of the men who are responsible for these services, it might be surprising; at least the point of view of the intern and often a lot besides would be learned, most of which would do far more good than any possible harm, unless it be to one's exaggerated and, perhaps, unjustified pride; and this harm, paradoxically, really would do good.

Of our recent interns 62 per cent elected to go further with from one to three years more in the laboratory or hospital work before going into practice. We have strongly encouraged the continuation of graduate study and, as time goes on, a large number are failing to rest

content with one year of service. All of our men from the 1929-1930 group continued in hospital work. It is also customary with us to select each year several of the outstanding men, providing them with a stipend of from $100 to $150 a month, and maintenance, for a year of residency in our own hospital in various departments. We have also sent men of especial capabilities to other clinics for from six months to a year, paying them a living stipend and having them return, ultimately, to take assistantships on the permanent staff.—H. A. Foss (*J. A. M. A.*, March 28, 1931, p. 1004).

The Hospital, The Medical College and The Intern

The primary object of the internship is to provide opportunities whereby recent graduates may obtain practical experience in the practice of medicine under proper supervision. The hospital offering intern training must recognize its responsibilities to the student. These responsibilities primarily concern the administrator and the medical staff. Their attitude toward the young graduate is of great importance; unless it comprises a recognition of his needs, of the reasons for his service and an understanding of the value of the internship in relation to his future career; unless they provide ample opportunities for experience and study and constantly stimulate in him a desire to make the most of those opportunities, they have no right to ask the young graduate to serve in their institution merely in order that tiresome routine duties may be performed.

The administrator and the medical staff together should definitely organize the intern service and see to it that the new intern is properly introduced to the service.

It is the responsibility of the administrator to explain the general organization of his institution. A tour through the hospital before the intern enters on his service, with introductions to the several heads of departments, has been found to be very helpful. It is the duty of the administrator to see to it that the hospital provides proper living quarters for the intern staff and that their food and other requirements are adequately served. Recreational facilities should be provided, for it must not be forgotten that these young men and women have need of diversion and healthful exercise.

It is the responsibility of the medical staff to provide for the professional training. The service should be definitely organized and should provide for the assumption of increasing responsibilities by the intern as his ability and proficiency develop. The intern should be placed in direct charge of every patient admitted to the institution, whether indigent and in the free service or a private patient. He should be required to take histories, make physical examinations and diagnoses and direct therapy for all patients under the supervision of the staff. The attitude held toward him by the members of the staff should be that of colleague and consultant. They should thoroughly discuss all elements of the case with him, correct and direct him, and suggest diagnostic and therapeutic measures when necessary.

As a student, the intern has been primarily trained in the scientific, empiric and theoretical aspects of medicine; he should now be introduced more thoroughly into the art of applying this knowledge. He should therefore be taught the proper approach to the patient and to relatives and friends. He should be required to meet those interested in the patient and interpret the observations and opinions of his staff officers, explain to them the progress of the case, the measures of relief and therapy that have been advised, and in every way conduct the case as though he were directly responsible. It goes without saying, however, that in all of this he should be guided by his staff and that he should bear in mind the relation of his superior

to the patient. Should the patient's malady terminate in death, it should be his duty to make the request for autopsy. In this he can hope to be successful only if he has won the confidence of the relatives.

The medical staff is also responsible for the provision of adequate library facilities. It is its further duty to stimulate the intern's reading and study. By encouraging and insisting on his participation in clinical conferences and in the presentation of these and case reports, much can be accomplished.

In addition to these measures of professional training, the staff carries the grave responsibility of the intern's training in medical ethics. Though he will have had instruction while in college in the ideals and ethics of the profession, the attitude and conduct of the various members of the hospital staff toward one another will primarily influence his future development in this regard. Destructive criticism and questionable practices on the part of an intern's staff officers have only too often wrought serious harm to the character and career of a young man. Though the college may have done its task as carefully and thoroughly as possible, the influence exerted by the intern's superiors will take precedence in most cases. It is the hospital, therefore, and particularly the members of the hospital staff to whom we must look for the final development and proper introduction of the young man to the art and ethics of the practice of medicine.

In return for these many educational advantages and opportunities, the hospital has a right to expect that the intern will conscientiously devote himself to his duties, even to those that are uninteresting or of a routine nature; that he will conduct himself as a gentleman and as a full-fledged physician; that he will fit into his important but relatively minor place in the hospital organization in an harmonious manner, do everything in his power for the good of the patients assigned to him and refrain from doing anything that will in any way interfere with the best interests of the patient or of the hospital.—A. C. BACHMEYER, (*J.A.M.A.*, March 28, 1931, p. 1002).

Industrial Medical Course for Medical Schools

The curriculum recommended by a committee appointed at the instigation of the secretary of labor and industry of the state of Pennsylvania is one which has been in effect in the University of Pennsylvania for a number of years. It affects both undergraduate and graduate students.

The program is divided into two parts. It is proposed that the first part should be introduced into all medical colleges for the purpose of reaching the students who will become general practitioners so that they may have some training in the occupational diseases problem.

The second part is designed for a special intensive course of training in industrial medicine for postgraduate students.

Part 1: One trimester of one period a week. *Discussions*: 1. History; general development; statistics. 2. Personal factors—age, sex, home, habits, nutrition, wages. 3. Welfare; sanitation. 4. Ventilation; light; temperature. 5. Hours; posture; tension; night work; fatigue. 6. Lead. 7. Mercury; arsenic; chrome; antimony, etc. 8. Coal tar products; volatile solvents. 9. Gases; fumes; vapors. 10. Dusts. 11. Medical service. 12. Safety; fire.

Laboratory: 1. Dust; filter; Palmer; impinger. Three to four periods. 2. Ventilation: fumes or smoke, anemometer; katathermometer. Two or three periods a week. 3. Carbon monoxide: two or three periods. 4. Light: one period. 5. Fumes: two or three periods.

Part 2: A department of industrial hygiene for postgraduate students.—*Penn. M. J.*, July, 1931, p. 727.

A New Educational Pattern

Enrolment in the Yale University School of Medicine is limited to fifty a year. Students are selected on the basis, not only of scholarship, but of personality, intelligence, and achievement in any direction. The curriculum is elastic, so that a student may take up work which he is equipped to do, whether or not he selects courses in the usual order. The point is that, during the first two years, he must gain command of the fundamentals in biology. Attendance records and periodic examinations in each course have been eliminated. The student is on his own.

At the end of two years, or thereabouts, he comes up on his own volition for examination, not before those from whom he has been receiving instruction, but before a group representing the clinical section of the school. This group endeavors to find out if the student has mastered the basic facts and methods to an extent that he can profit from instruction in the clinical division. The student's second examination comes at the end of the fourth year, or thereabouts, for the purpose of determining whether or not he has earned an M.D. degree. This is quite different from the customary regimentation and collection of credits, semester after semester. The student must learn to work things out for himself, to grasp principles and methods rather than to accumulate a great body of facts which he may or may not use.

The courses have been so condensed that the average student can do the required work in one-half of his time. The rest of his time he may devote to further study of the fundamentals or he may follow a particular interest. There are over one hundred special courses offered at the present time from which he may choose. Above all, the student has time for the development of interests outside of books and laboratory.

A plan is now being formulated to introduce into the medical curriculum, during the first two years, sociologic study which will be practical in the sense that actual individuals and families will be studied, but at the same time the fundamentals of sociology will be brought out. Already the study of the mind of man has been made an integral part of the curriculum in the Yale School of Medicine, through the organization of the department of psychiatry and mental hygiene.

In the future it should be impossible for the student to complete his course of training without being fully aware that there are many factors bearing upon human wellbeing and that none of these can be completely disassociated from others. The student will develop into no less a specialist than is the practitioner of today, but he will have more freedom in the choice of his specialty; he may be crammed with less detailed knowledge than is customary today, but he will have had more experience in the application of fundamental principles and he should have a greater appreciation of the necessity of cooperating with other specialists in meeting problems of human welfare.—M. C. WINTERNITZ, *Clin. M. & S.*, July, 1931, p. 473.

Registration of Physicians in China

The Municipal Council of the Foreign Settlement of Shanghai has authorized a system of voluntary registration of physicians, dentists and veterinary surgeons under the supervision of a medical board. This board will consist of the commissioner of health, one medical practitioner nominated by the council and the remaining six members are to be nominated by six medical societies (named).

A register will be kept. A fee of 2 Tls (taels) will be charged for each registration. The following persons will be entitled to register: "The holder of any degree, diploma or license in medicine of any medical, dental or veterinary school of Europe, the United States of America, British Colonies, South Amer-

ica, China, Japan—the degrees, diplomas and licenses of which are recognized by the registration authority of the country concerned, but in the case of foreigners, subject to the approval of the Consul having jurisdiction. In the case of Chinese or foreigners having no consular representation, the Department of Health of the National Government." Army, navy and government officers and temporary residents are exempt from registration.

The recording of deaths and births is provided for, as well as the notification of communicable diseases (24 such diseases are named). One tael will be paid for each notification. *National M. J.*, China, 17:378 (June) 1931.

Course in Medical Technology

The University of Kentucky, Lexington, has arranged a four-year course in medical technology to meet the demand for laboratory technicians. The course will be under the supervision of the department of bacteriology. It will include foreign languages, inorganic and organic chemistry, comparative anatomy, quantitative analysis, bacteriology of foods and of water and sewage, histology, embryology, immunology and serology, general pathology, laboratory diagnosis and x-ray technic. Senior students will be required to spend a part of their time in hospital laboratories in Lexington. For students who wish to prepare for medical college, substitutions may be made in the course to meet entrance requirements for medical colleges.

The New Russian Program

Russia has adopted a policy of developing preventive medicine and of enlarging the field of diseases considered to be social illnesses. In 1930 a reorganization scheme was promulgated. A system of scholarship was set up by which, beginning with 1931, 60 per cent of the medical students should each receive 90 roubles per month, on condition that they contract to serve the state after their training is finished. In 1930 there were 24 medical schools, and it is planned to have six more established by 1932.

The basis of the new plan for medical schools is given as follows: (1) The graduates should be trained in rigorous, scientific and materialistic thought; they should be physicians able therapeutically and prophylactically to serve the masses. (2) The course should be thoroughly coordinated, duplication eliminated and number of subjects restricted. (3) Recitations and lectures should be restricted. The students should be encouraged to take part in discussions. Laboratory work, clerkships and seminars should be increased. "Active" teaching methods with study of the material by the students themselves should be used. "Practical" work should take 50 per cent of the time; but the whole atmosphere should be practical. Annual examination should be suppressed, but attendance should be recorded. (4) Latin should be discontinued for all purposes and Russian terms should be used consistently.

The medical faculties are separated from the universities and placed under the Commissariat of Health as practical or technical schools. Specialists are desired for the following fields: (1) The collective farms; (2) state industries; (3) maternity and infancy protection; (4) contagious disease prophylaxis; (5) health centers; (6) the usual clinical branches. Three faculties are set up: (1) General therapy and prophylaxis with a section of stomatology; (2) hygiene and sanitary sciences; (3) maternity and child protection, with a section of maternity and infancy protection and one of child protection. Other sections of the faculties will be set up as needed.

Admissions of students to schools and to sections will be controlled in accordance with future needs. Students will be admitted twice a year, in January and August, and all work will be done in two groups. It is not possible to state

what the preliminary education will be. The courses are to last four years, except that in stomatology which is three and a half years long. Students of general therapy and prophylaxis and of maternal and child protection must spend a fifth year in active work under direction.

The five day week which is general in the U. S. S. R. is adopted. Each day is counted as six hours. The school year contains 216 working days. The curricula include basic physics, chemistry and biology and a little time for a foreign language. In addition to the usual subjects there are lectures in the principles of sovietism, in political economy, in the physiology of materialism and in military science. There is also physical work in the collective farms, state industries and health centers; and a total of 11 "decades" of military service, are required. The student while at work in the summers receives in addition to his scholarship from 50 to 60 roubles a month. It is said that this work prevents him from being isolated from the actualities of life and that he can study the conditions which produce disease. In connection with the military service it is said that a physician is always called to serve, some day or other, in the army.

In the programs as given the medical course proper for students of general therapy and prophylaxis does not differ greatly from ordinary curricula, except that the usual subjects are reduced to about two-thirds of their ordinary minimum allottment and that hygiene is given from five to ten times as much time as is commonly allotted. For students of maternal and child welfare, the other usual clinical subjects are cut to about 40 per cent; the work in pediatrics and education is increased from 7 to 10 times, but obstetrics is still below the usual schedule.

In the Faculty of Sanitation, anatomy and obstetrics are reduced to minima of 28 and 16 per cent of the usual amounts; hygiene and related subjects are multiplied tenfold. Nothing is known of the facilities to be available for clinical teaching.

In the medical school there are to be three grades of instructors: professors; docents and assistants. All are to be on full time. Their pay and required hours of teaching are as follows: professor—3,600 roubles per year; 240-360 hours per year; docent—3,000 roubles, 360 hours; assistant—2,520 roubles, 480 hours.

In principle, an individual cannot hold more than one chair but the holding of chairs in different schools is somewhat encouraged; the pay is then at the rate of 75 per cent of the base pay of each chair for hours above 360 per year.

In summary: a clear cut experiment in medical education is proposed in Russia. There is almost complete control of medical education, including the number of students admitted, not only in toto, but to the various sections, and including the future activities of the students. Medical education is frankly divorced from university work and made to serve the needs of the state.

The medical course is reduced by at least one year. A small amount of new work in special politics, economics and philosophy is introduced. These changes reduce the usual medical subjects to two-thirds, or less, of the time given in ordinary curricula. Hygiene and related subjects are given much more time than is usually given. Changes in teaching methods are advocated.

More novel is the splitting of the curriculum into three sections designed to train physicians to work in distinct fields. This presumes a smaller substratum of knowledge and experience common to all medical graduates than has ever been suggested before. It twould seem to make transition from one field to another impossible. The plan apparently does not provide for investigative work in connection with the teaching of medicine.—F. R. Dieudaide: *National M. J.*, China, 17:283 (June) 1931.

Book Reviews

Diagnostic Methods and Interpretations in Internal Medicine

By Samuel A. Loewenburg, associate professor of medicine, Jefferson Medical College. 2nd Ed. F. A. Davis Company, Philadelphia. 1931. Price, $10.00.

Herein are given instructions on the various methods of examining the patient, descriptions of normal findings, enumeration of pathologic conditions with the normal and pathologic physical signs and the reasons for these signs. The respiratory and cardiac systems are discussed fully—much new material being added in this edition; less space is given to other systems. Dr. M. K. Meyers contributes the chapter on the nervous system, and Dr. Leon Solis-Cohen writes on radiography. The chapter on laboratory interpretations is limited in the main to interpretation of laboratory analyses as reported on by the pathologist, the chemist, serologist or clinical laboratory specialist—which makes the book worth while to the student. There is much here to meet with favor. Hundreds of well made illustrations add much to the value of the book. It can be recommended to the student.

Textbook of Histology

By Eugene C. Piette, M. D., formerly Associate Professor of Histology and Embryology in the University of Kharkov, Russia. F. A. Davis Company, Philadelphia. 1931. Price, $4.50.

A careful review of this book fails to reveal anything new or any departure from the customary manner of presentations of this subject. It is compact, concise, printed in very legible type and profusely illustrated by well made drawings, none of which are original. The free use of bold blackface type is an admirable feature, one which will appeal to the student. It makes reference easy and saves time. Its small size will commend it to the student, and after he has used it, he will like it. It is a "multum in parvo."

Cunningham's Textbook of Anatomy

Edited by Arthur Robinson, professor of anatomy, University of Edinburgh. 6th Ed. William Wood and Company, New York. 1931. Price, $11.00.

Among the six new contributors to this edition is an American anatomist, T. Wingate Todd, of the Western Reserve University, Cleveland. Dr. Todd has revised the section on the respiratory system. The B. N. A. terminology has been retained, but the B. N. A. classification of joints has been replaced by one more in accord with present day teaching. Many old illustrations have been replaced and many new ones have been added. The many friends of this book will like it better than ever, and no doubt it will win new friends. It is a justly popular text in anatomy.

Nutrition and Diet in Health and Disease

By James S. McLester, professor of medicine, University of Alabama. 2nd Ed. W. B. Saunders Company, Philadelphia. 1931. Price, $8.50.

In the July, 1928, issue of this Journal the review of the first edition of this book was published. It was wholly favorable to its use as a reference book. The second edition has been thoroughly revised in keeping with recent discoveries concerning vitamins, minerals and deficiency diseases, and in the treatment of diabetes, obesity, gout and disorders of

digestion. Among the added sections are those dealing with the toxemias of pregnancy, food poisoning, irritable colon and protozoan infections. Sections dealing with enzymes, protein requirement and epilepsy, and the chapter on diseases of the blood have been rewritten. In the opinion of the reviewer it is one of the best books written on this subject because it is so outstandingly practical.

Practical Anesthetics

By Charles F. Hadfield, anesthetist in St. Bartholomew's Hospital. 2nd Ed. William Wood and Company, New York. 1931. Price, $3.50.

The student who intends to devote himself to this branch of medical practice will find this comparatively small book an excellent one for a good preparation. It is small and compact; well written and containing all accepted data on anesthetics, anesthesia and apparatus used.

Clinical Diagnosis by Laboratory Methods

By James Campbell Todd, late professor of clinical pathology, University of Colorado, and Arthur H. Sanford, professor of clinical pathology, University of Minnesota. 7th Ed. W. B. Saunders Company, Philadelphia. 1931. Price $6.00.

Little needs to be said by way of review of this well known and deservedly popular book. The senior author was an authority without par, and the junior author has done well in carrying out Dr. Todd's ideas as to what this book should be for the medical student. Of course, he cannot possibly assimulate in the few hours given to this subject all the information contained in this book, but he will always keep it near at hand as a splendid means for getting accurate information quickly—and then put it to good use. It can be recommended without reservations.

An Introduction to Neurology

By C. Judson Herrick, professor of neurology, University of Chicago. 5th Ed. W. B. Saunders Company, Philadelphia. 1931. Price, $3.00.

This book will aid the student to organize his knowledge in definite functional patterns earlier in his work than is often the case, and to appreciate the significance of the nervous system as a working mechanism. It is an introduction in a literal sense. References to important works are added. The chapters on the neuron, reflex circuits and general physiology of the nervous system have been rewritten and all of the text has been revised in the light of recent research. To the medical student it is a great convenience to find in one book all the essential facts relating to the nervous system which he is expected to master. To facilitate ready reference, a well prepared index is presented and with it a brief glossary of some of the more commonly used technical terms.

Practical Methods in the Diagnosis and Treatment of Veneral Diseases

By David Lees, Royal Infirmary, Edinburgh. 2nd Ed. William Wood and Company, New York. 1931. Price, $5.00.

Rewritten and brought up to date. The "Pharmacopoeia" in the back of the book will appeal to recent graduates who are not yet quite sure of how to prepare and use accepted products in the treatment of venereal diseases.